



SEQUENCE LISTING

- <110> Jakobovits, Robert
Morrison, Robert Kendall
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Challita-Eid, Pia M.
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Kanner, Steven B.
- <120> Nucleic Acids and Corresponding Proteins
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- <140> US 10/776,773
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- <150> US 10/280,340
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- <150> US 10/277,292
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- <150> US 09/935,430
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- <150> US 60/446,633
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Lys His Leu Gln Arg Ser Leu Leu Glu Gln Glu Asn His Ser Pro Leu	
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Thr	Asn	Asp	Phe	Ser	Gly	Leu	Thr	Asn	Ala	Ile	Ser	Ile	His	Leu	Gly		
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Phe	Asn	Asn	Ile	Ala	Asp	Ile	Glu	Ile	Gly	Ala	Phe	Asn	Gly	Leu	Gly		
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Leu	Leu	Lys	Gln	Leu	His	Ile	Asn	His	Asn	Ser	Leu	Glu	Ile	Leu	Lys		
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Glu	Asp	Thr	Phe	His	Gly	Leu	Glu	Asn	Leu	Glu	Phe	Leu	Gln	Ala	Asp		
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Arg	Leu	Lys	Val	Leu	Ile	Leu	Asn	Asp	Asn	Ala	Ile	Glu	Ser	Leu	Pro		
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Pro	Asn	Ile	Phe	Arg	Phe	Val	Pro	Leu	Thr	His	Leu	Asp	Leu	Arg	Gly
			180					185					190		
Asn	Gln	Leu	Gln	Thr	Leu	Pro	Tyr	Val	Gly	Phe	Leu	Glu	His	Ile	Gly
		195					200					205			
Arg	Ile	Leu	Asp	Leu	Gln	Leu	Glu	Asp	Asn	Lys	Trp	Ala	Cys	Asn	Cys
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Asp	Leu	Leu	Gln	Leu	Lys	Thr	Trp	Leu	Glu	Asn	Met	Pro	Pro	Gln	Ser
225					230					235					240
Ile	Ile	Gly	Asp	Val	Val	Cys	Asn	Ser	Pro	Pro	Phe	Phe	Lys	Gly	Ser
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Ile	Leu	Ser	Arg	Leu	Lys	Lys	Glu	Ser	Ile	Cys	Pro	Thr	Pro	Pro	Val
			260					265					270		
Tyr	Glu	Glu	His	Glu	Asp	Pro	Ser	Gly	Ser	Leu	His	Leu	Ala	Ala	Thr
		275					280					285			
Ser	Ser	Ile	Asn	Asp	Ser	Arg	Met	Ser	Thr	Lys	Thr	Thr	Ser	Ile	Leu
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Lys	Leu	Pro	Thr	Lys	Ala	Pro	Gly	Leu	Ile	Pro	Tyr	Ile	Thr	Lys	Pro
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Ser	Thr	Gln	Leu	Pro	Gly	Pro	Tyr	Cys	Pro	Ile	Pro	Cys	Asn	Cys	Lys
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Val	Leu	Ser	Pro	Ser	Gly	Leu	Leu	Ile	His	Cys	Gln	Glu	Arg	Asn	Ile
			340					345					350		
Glu	Ser	Leu	Ser	Asp	Leu	Arg	Pro	Pro	Pro	Gln	Asn	Pro	Arg	Lys	Leu
		355					360					365			
Ile	Leu	Ala	Gly	Asn	Ile	Ile	His	Ser	Leu	Met	Lys	Ser	Asp	Leu	Val
	370					375					380				
Glu	Tyr	Phe	Thr	Leu	Glu	Met	Leu	His	Leu	Gly	Asn	Asn	Arg	Ile	Glu
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Val	Leu	Glu	Glu	Gly	Ser	Phe	Met	Asn	Leu	Thr	Arg	Leu	Gln	Lys	Leu
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Tyr	Leu	Asn	Gly	Asn	His	Leu	Thr	Lys	Leu	Ser	Lys	Gly	Met	Phe	Leu
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Gly	Leu	His	Asn	Leu	Glu	Tyr	Leu	Tyr	Leu	Glu	Tyr	Asn	Ala	Ile	Lys
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Tyr	Leu	Asn	Asn	Asn	Leu	Gln	Val	Leu	Pro	Pro	His	Ile	Phe	Ser	
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Gly	Val	Pro	Leu	Thr	Lys	Val	Asn	Leu	Lys	Thr	Asn	Gln	Phe	Thr	His
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Leu	Pro	Val	Ser	Asn	Ile	Leu	Asp	Asp	Leu	Asp	Leu	Leu	Thr	Gln	Ile
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Asp	Leu	Glu	Asp	Asn	Pro	Trp	Asp	Cys	Ser	Cys	Asp	Leu	Val	Gly	Leu
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Gln	Gln	Trp	Ile	Gln	Lys	Leu	Ser	Lys	Asn	Thr	Val	Thr	Asp	Asp	Ile
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Asn	Ser	Glu	Ile	Leu	Cys	Pro	Gly	Leu	Val	Asn	Asn	Pro	Ser	Met	Pro
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Thr	Gln	Thr	Ser	Tyr	Leu	Met	Val	Thr	Thr	Pro	Ala	Thr	Thr	Thr	Asn
			580					585					590		
Thr	Ala	Asp	Thr	Ile	Leu	Arg	Ser	Leu	Thr	Asp	Ala	Val	Pro	Leu	Ser
		595					600					605			
Val	Leu	Ile	Leu	Gly	Leu	Leu	Ile	Met	Phe	Ile	Thr	Ile	Val	Phe	Cys
		610				615					620				
Ala	Ala	Gly	Ile	Val	Val	Leu	Val	Leu	His	Arg	Arg	Arg	Arg	Tyr	Lys
625					630				635						640
Lys	Lys	Gln	Val	Asp	Glu	Gln	Met	Arg	Asp	Asn	Ser	Pro	Val	His	Leu
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Gln	Tyr	Ser	Met	Tyr	Gly	His	Lys	Thr	Thr	His	His	Thr	Thr	Glu	Arg
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Pro	Ser	Ala	Ser	Leu	Tyr	Glu	Gln	His	Met	Gly	Ala	His	Glu	Glu	Leu
		675					680					685			

Lys Leu Met Glu Thr Leu Met Tyr Ser Arg Pro Arg Lys Val Leu Val
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 Glu Gln Thr Lys Asn Glu Tyr Phe Glu Leu Lys Ala Asn Leu His Ala
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 Ser Leu Leu Ala Cys Ile Ser Leu His Ser Gln Thr Pro Val Leu Ser
 15 20 25

 tcc aga ggc tct tgt gat tct ctt tgc aat tgt gag gaa aaa gat ggc 148
 Ser Arg Gly Ser Cys Asp Ser Leu Cys Asn Cys Glu Glu Lys Asp Gly
 30 35 40

 aca atg cta ata aat tgt gaa gca aaa ggt atc aag atg gta tct gaa 196
 Thr Met Leu Ile Asn Cys Glu Ala Lys Gly Ile Lys Met Val Ser Glu
 45 50 55

 ata agt gtg cca cca tca cga cct ttc caa cta agc tta tta aat aac 244
 Ile Ser Val Pro Pro Ser Arg Pro Phe Gln Leu Ser Leu Leu Asn Asn
 60 65 70

 ggc ttg acg atg ctt cac aca aat gac ttt tct ggg ctt acc aat gct 292
 Gly Leu Thr Met Leu His Thr Asn Asp Phe Ser Gly Leu Thr Asn Ala
 75 80 85 90

 att tca ata cac ctt gga ttt aac aat att gca gat att gag ata ggt 340
 Ile Ser Ile His Leu Gly Phe Asn Asn Ile Ala Asp Ile Glu Ile Gly
 95 100 105

 gca ttt aat ggc ctt ggc ctc ctg aaa caa ctt cat atc aat cac aat 388
 Ala Phe Asn Gly Leu Gly Leu Leu Lys Gln Leu His Ile Asn His Asn
 110 115 120

 tct tta gaa att ctt aaa gag gat act ttc cat gga ctg gaa aac ctg 436
 Ser Leu Glu Ile Leu Lys Glu Asp Thr Phe His Gly Leu Glu Asn Leu
 125 130 135

 gaa ttc ctg caa gca gat aac aat ttt atc aca gtg att gaa cca agt 484
 Glu Phe Leu Gln Ala Asp Asn Asn Phe Ile Thr Val Ile Glu Pro Ser
 140 145 150

 gcc ttt agc aag ctc aac aga ctc aaa gtg tta att tta aat gac aat 532
 Ala Phe Ser Lys Leu Asn Arg Leu Lys Val Leu Ile Leu Asn Asp Asn
 155 160 165 170

 gct att gag agt ctt cct cca aac atc ttc cga ttt gtt cct tta acc 580
 Ala Ile Glu Ser Leu Pro Pro Asn Ile Phe Arg Phe Val Pro Leu Thr

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Ile	Pro	Cys	Asn	Cys	Lys	Val	Leu	Ser	Pro	Ser	Gly	Leu	Leu	Ile	His															
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Gln	Asn	Pro	Arg	Lys	Leu	Ile	Leu	Ala	Gly	Asn	Ile	Ile	His	Ser	Leu															
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380					385					390																				
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Glu	*																													
395																														
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 Ser Leu Cys Asn Cys Glu Glu Lys Asp Gly Thr Met Leu Ile Asn Cys
 35 40 45
 Glu Ala Lys Gly Ile Lys Met Val Ser Glu Ile Ser Val Pro Pro Ser
 50 55 60
 Arg Pro Phe Gln Leu Ser Leu Leu Asn Asn Gly Leu Thr Met Leu His
 65 70 75 80
 Thr Asn Asp Phe Ser Gly Leu Thr Asn Ala Ile Ser Ile His Leu Gly
 85 90 95
 Phe Asn Asn Ile Ala Asp Ile Glu Ile Gly Ala Phe Asn Gly Leu Gly
 100 105 110
 Leu Leu Lys Gln Leu His Ile Asn His Asn Ser Leu Glu Ile Leu Lys
 115 120 125
 Glu Asp Thr Phe His Gly Leu Glu Asn Leu Glu Phe Leu Gln Ala Asp
 130 135 140
 Asn Asn Phe Ile Thr Val Ile Glu Pro Ser Ala Phe Ser Lys Leu Asn
 145 150 155 160
 Arg Leu Lys Val Leu Ile Leu Asn Asp Asn Ala Ile Glu Ser Leu Pro
 165 170 175
 Pro Asn Ile Phe Arg Phe Val Pro Leu Thr His Leu Asp Leu Arg Gly
 180 185 190
 Asn Gln Leu Gln Thr Leu Pro Tyr Val Gly Phe Leu Glu His Ile Gly
 195 200 205
 Arg Ile Leu Asp Leu Gln Leu Glu Asp Asn Lys Trp Ala Cys Asn Cys
 210 215 220
 Asp Leu Leu Gln Leu Lys Thr Trp Leu Glu Asn Met Pro Pro Gln Ser
 225 230 235 240
 Ile Ile Gly Asp Val Val Cys Asn Ser Pro Pro Phe Phe Lys Gly Ser
 245 250 255
 Ile Leu Ser Arg Leu Lys Lys Glu Ser Ile Cys Pro Thr Pro Pro Val
 260 265 270
 Tyr Glu Glu His Glu Asp Pro Ser Gly Ser Leu His Leu Ala Ala Thr
 275 280 285
 Ser Ser Ile Asn Asp Ser Arg Met Ser Thr Lys Thr Thr Ser Ile Leu
 290 295 300
 Lys Leu Pro Thr Lys Ala Pro Gly Leu Ile Pro Tyr Ile Thr Lys Pro
 305 310 315 320
 Ser Thr Gln Leu Pro Gly Pro Tyr Cys Pro Ile Pro Cys Asn Cys Lys
 325 330 335
 Val Leu Ser Pro Ser Gly Leu Leu Ile His Cys Gln Glu Arg Asn Ile
 340 345 350
 Glu Ser Leu Ser Asp Leu Arg Pro Pro Gln Asn Pro Arg Lys Leu
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 Ser Lys Ala Ser Gly Arg Gly Arg Arg Glu Glu
 385 390 395

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 tacagataac gtcaggaaga gtctctgctt tacagaatcg gatttcatca catgacaac 479
 atg aag ctg tgg att cat ctc ttt tat tca tct ctc ctt gcc tgt ata 527
 Met Lys Leu Trp Ile His Leu Phe Tyr Ser Ser Leu Leu Ala Cys Ile
 1 5 10 15

tct tta cac tcc caa act cca gtg ctc tca tcc aga ggc tct tgt gat 575
 Ser Leu His Ser Gln Thr Pro Val Leu Ser Ser Arg Gly Ser Cys Asp
 20 25 30

tct ctt tgc aat tgt gag gaa aaa gat ggc aca atg cta ata aat tgt 623
 Ser Leu Cys Asn Cys Glu Glu Lys Asp Gly Thr Met Leu Ile Asn Cys
 35 40 45

gaa gca aaa ggt atc aag atg gta tct gaa ata agt gtg cca cca tca 671
 Glu Ala Lys Gly Ile Lys Met Val Ser Glu Ile Ser Val Pro Pro Ser
 50 55 60

cga cct ttc caa cta agc tta tta aat aac ggc ttg acg atg ctt cac 719
 Arg Pro Phe Gln Leu Ser Leu Leu Asn Asn Gly Leu Thr Met Leu His
 65 70 75 80

aca aat gac ttt tct ggg ctt acc aat gct att tca ata cac ctt gga 767
 Thr Asn Asp Phe Ser Gly Leu Thr Asn Ala Ile Ser Ile His Leu Gly
 85 90 95

ttt aac aat att gca gat att gag ata ggt gca ttt aat ggc ctt ggc 815
 Phe Asn Asn Ile Ala Asp Ile Glu Ile Gly Ala Phe Asn Gly Leu Gly
 100 105 110

ctc ctg aaa caa ctt cat atc aat cac aat tct tta gaa att ctt aaa 863
 Leu Leu Lys Gln Leu His Ile Asn His Asn Ser Leu Glu Ile Leu Lys
 115 120 125

gag gat act ttc cat gga ctg gaa aac ctg gaa ttc ctg caa gca gat 911
 Glu Asp Thr Phe His Gly Leu Glu Asn Leu Glu Phe Leu Gln Ala Asp
 130 135 140

aac aat ttt atc aca gtg att gaa cca agt gcc ttt agc aag ctc aac 959
 Asn Asn Phe Ile Thr Val Ile Glu Pro Ser Ala Phe Ser Lys Leu Asn
 145 150 155 160

aga ctc aaa gtg tta att tta aat gac aat gct att gag agt ctt cct 1007
 Arg Leu Lys Val Leu Ile Leu Asn Asp Asn Ala Ile Glu Ser Leu Pro
 165 170 175

cca aac atc ttc cga ttt gtt cct tta acc cat cta gat ctt cgt gga 1055
 Pro Asn Ile Phe Arg Phe Val Pro Leu Thr His Leu Asp Leu Arg Gly
 180 185 190

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Asp	Leu	Leu	Gln	Leu	Lys	Thr	Trp	Leu	Glu	Asn	Met	Pro	Pro	Gln	Ser	
225					230					235					240	
ata	att	ggt	gat	gtt	gtc	tgc	aac	agc	cct	cca	ttt	ttt	aaa	gga	agt	1247
Ile	Ile	Gly	Asp	Val	Val	Cys	Asn	Ser	Pro	Pro	Phe	Phe	Lys	Gly	Ser	
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Ile	Leu	Ser	Arg	Leu	Lys	Lys	Glu	Ser	Ile	Cys	Pro	Thr	Pro	Pro	Val	
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Tyr	Glu	Glu	His	Glu	Asp	Pro	Ser	Gly	Ser	Leu	His	Leu	Ala	Ala	Thr	
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aaa	cta	ccc	acc	aaa	gca	cca	ggt	ttg	ata	cct	tat	att	aca	aag	cca	1439
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Ser	Thr	Gln	Leu	Pro	Gly	Pro	Tyr	Cys	Pro	Ile	Pro	Cys	Asn	Cys	Lys	
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Val	Leu	Ser	Pro	Ser	Gly	Leu	Leu	Ile	His	Cys	Gln	Glu	Arg	Asn	Ile	
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Glu	Ser	Leu	Ser	Asp	Leu	Arg	Pro	Pro	Pro	Gln	Asn	Pro	Arg	Lys	Leu	
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Val	Leu	Glu	Glu	Gly	Ser	Phe	Met	Asn	Leu	Thr	Arg	Leu	Gln	Lys	Leu	
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Tyr	Leu	Asn	Gly	Asn	His	Leu	Thr	Lys	Leu	Ser	Lys	Gly	Met	Phe	Leu	
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		435					440					445				
gaa	ata	ctg	cca	gga	acc	ttt	aat	cca	atg	cct	aaa	ctt	aaa	gtc	ctg	1871
Glu	Ile	Leu	Pro	Gly	Thr	Phe	Asn	Pro	Met	Pro	Lys	Leu	Lys	Val	Leu	

450	455	460	
tat tta aat aac aac ctc ctc caa gtt tta cca cca cat att ttt tca			1919
Tyr Leu Asn Asn Asn Leu Leu Gln Val Leu Pro Pro His Ile Phe Ser			
465	470	475	480
ggg gtt cct cta act aag gta aat ctt aaa aca aac cag ttt acc cat			1967
Gly Val Pro Leu Thr Lys Val Asn Leu Lys Thr Asn Gln Phe Thr His			
	485	490	495
cta cct gta agt aat att ttg gat gat ctt gat tta cta acc cag att			2015
Leu Pro Val Ser Asn Ile Leu Asp Asp Leu Asp Leu Leu Thr Gln Ile			
	500	505	510
gac ctt gag gat aac ccc tgg gac tgc tcc tgt gac ctg gtt gga ctg			2063
Asp Leu Glu Asp Asn Pro Trp Asp Cys Ser Cys Asp Leu Val Gly Leu			
	515	520	525
cag caa tgg ata caa aag tta agc aag aac aca gtg aca gat gac atc			2111
Gln Gln Trp Ile Gln Lys Leu Ser Lys Asn Thr Val Thr Asp Asp Ile			
	530	535	540
ctc tgc act tcc ccc ggg cat ctc gac aaa aag gaa ttg aaa gcc cta			2159
Leu Cys Thr Ser Pro Gly His Leu Asp Lys Lys Glu Leu Lys Ala Leu			
	545	550	555
aat agt gaa att ctc tgt cca ggt tta gta aat aac cca tcc atg cca			2207
Asn Ser Glu Ile Leu Cys Pro Gly Leu Val Asn Asn Pro Ser Met Pro			
	565	570	575
aca cag act agt tac ctt atg gtc acc act cct gca aca aca aca aat			2255
Thr Gln Thr Ser Tyr Leu Met Val Thr Thr Pro Ala Thr Thr Thr Asn			
	580	585	590
acg gct gat act att tta cga tct ctt acg gac gct gtg cca ctg tct			2303
Thr Ala Asp Thr Ile Leu Arg Ser Leu Thr Asp Ala Val Pro Leu Ser			
	595	600	605
gtt cta ata ttg gga ctt ctg att atg ttc atc act att gtt ttc tgt			2351
Val Leu Ile Leu Gly Leu Leu Ile Met Phe Ile Thr Ile Val Phe Cys			
	610	615	620
gct gca ggg ata gtg gtt ctt gtt ctt cac cgc agg aga aga tac aaa			2399
Ala Ala Gly Ile Val Val Leu Val Leu His Arg Arg Arg Tyr Lys			
	625	630	635
aag aaa caa gta gat gag caa atg aga gac aac agt cct gtg cat ctt			2447
Lys Lys Gln Val Asp Glu Gln Met Arg Asp Asn Ser Pro Val His Leu			
	645	650	655
cag tac agc atg tat ggc cat aaa acc act cat cac act act gaa aga			2495
Gln Tyr Ser Met Tyr Gly His Lys Thr Thr His His Thr Thr Glu Arg			
	660	665	670
ccc tct gcc tca ctc tat gaa cag cac atg gtg agc ccc atg gtt cat			2543
Pro Ser Ala Ser Leu Tyr Glu Gln His Met Val Ser Pro Met Val His			
	675	680	685
gtc tat aga agt cca tcc ttt ggt cca aag cat ctg gaa gag gaa gaa			2591
Val Tyr Arg Ser Pro Ser Phe Gly Pro Lys His Leu Glu Glu Glu Glu			
	690	695	700
gag agg aat gag aaa gaa gga agt gat gca aaa cat ctc caa aga agt			2639
Glu Arg Asn Glu Lys Glu Gly Ser Asp Ala Lys His Leu Gln Arg Ser			

705	710	715	720	
ctt ttg gaa cag gaa aat cat tca cca ctc aca ggg tca aat atg aaa				2687
Leu Leu Glu Gln Glu Asn His Ser Pro Leu Thr Gly Ser Asn Met Lys	725	730	735	
tac aaa acc acg aac caa tca aca gaa ttt tta tcc ttc caa gat gcc				2735
Tyr Lys Thr Thr Asn Gln Ser Thr Glu Phe Leu Ser Phe Gln Asp Ala	740	745	750	
agc tca ttg tac aga aac att tta gaa aaa gaa agg gaa ctt cag caa				2783
Ser Ser Leu Tyr Arg Asn Ile Leu Glu Lys Glu Arg Glu Leu Gln Gln	755	760	765	
ctg gga atc aca gaa tac cta agg aaa aac att gct cag ctc cag cct				2831
Leu Gly Ile Thr Glu Tyr Leu Arg Lys Asn Ile Ala Gln Leu Gln Pro	770	775	780	
gat atg gag gca cat tat cct gga gcc cac gaa gag ctg aag tta atg				2879
Asp Met Glu Ala His Tyr Pro Gly Ala His Glu Glu Leu Lys Leu Met	785	790	795	800
gaa aca tta atg tac tca cgt cca agg aag gta tta gtg gaa cag aca				2927
Glu Thr Leu Met Tyr Ser Arg Pro Arg Lys Val Leu Val Glu Gln Thr	805	810	815	
aaa aat gag tat ttt gaa ctt aaa gct aat tta cat gct gaa cct gac				2975
Lys Asn Glu Tyr Phe Glu Leu Lys Ala Asn Leu His Ala Glu Pro Asp	820	825	830	
tat tta gaa gtc ctg gag cag caa aca tag atggagagtt gagggctttc				3025
Tyr Leu Glu Val Leu Glu Gln Gln Thr *	835	840		
gccagaaatg ctgtgattct gttattaagt ccataccttg taaataagtg ccttacgtga				3085
gtgtgtcatc aatcagaacc taagcacaga gtaaactatg gggaaaaaaaa aagaagacga				3145
aacagaaact cagggatcac tgggagaagc catggcataa tcttcaggca atttagtctg				3205
tcccaaataa acatacatcc ttggcatgta aatcatcaag ggtaatagta atattcatat				3265
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<210> 11
 <211> 841
 <212> PRT
 <213> Homo sapiens

<400> 11
 Met Lys Leu Trp Ile His Leu Phe Tyr Ser Ser Leu Leu Ala Cys Ile
 1 5 10 15
 Ser Leu His Ser Gln Thr Pro Val Leu Ser Ser Arg Gly Ser Cys Asp
 20 25 30
 Ser Leu Cys Asn Cys Glu Glu Lys Asp Gly Thr Met Leu Ile Asn Cys
 35 40 45
 Glu Ala Lys Gly Ile Lys Met Val Ser Glu Ile Ser Val Pro Pro Ser
 50 55 60
 Arg Pro Phe Gln Leu Ser Leu Leu Asn Asn Gly Leu Thr Met Leu His
 65 70 75 80
 Thr Asn Asp Phe Ser Gly Leu Thr Asn Ala Ile Ser Ile His Leu Gly
 85 90 95
 Phe Asn Asn Ile Ala Asp Ile Glu Ile Gly Ala Phe Asn Gly Leu Gly
 100 105 110
 Leu Leu Lys Gln Leu His Ile Asn His Asn Ser Leu Glu Ile Leu Lys
 115 120 125
 Glu Asp Thr Phe His Gly Leu Glu Asn Leu Glu Phe Leu Gln Ala Asp
 130 135 140

Asn	Asn	Phe	Ile	Thr	Val	Ile	Glu	Pro	Ser	Ala	Phe	Ser	Lys	Leu	Asn
145					150					155					160
Arg	Leu	Lys	Val	Leu	Ile	Leu	Asn	Asp	Asn	Ala	Ile	Glu	Ser	Leu	Pro
			165					170						175	
Pro	Asn	Ile	Phe	Arg	Phe	Val	Pro	Leu	Thr	His	Leu	Asp	Leu	Arg	Gly
		180						185					190		
Asn	Gln	Leu	Gln	Thr	Leu	Pro	Tyr	Val	Gly	Phe	Leu	Glu	His	Ile	Gly
	195						200					205			
Arg	Ile	Leu	Asp	Leu	Gln	Leu	Glu	Asp	Asn	Lys	Trp	Ala	Cys	Asn	Cys
	210					215					220				
Asp	Leu	Leu	Gln	Leu	Lys	Thr	Trp	Leu	Glu	Asn	Met	Pro	Pro	Gln	Ser
225					230					235					240
Ile	Ile	Gly	Asp	Val	Val	Cys	Asn	Ser	Pro	Pro	Phe	Phe	Lys	Gly	Ser
				245					250					255	
Ile	Leu	Ser	Arg	Leu	Lys	Lys	Glu	Ser	Ile	Cys	Pro	Thr	Pro	Pro	Val
		260						265					270		
Tyr	Glu	Glu	His	Glu	Asp	Pro	Ser	Gly	Ser	Leu	His	Leu	Ala	Ala	Thr
	275						280					285			
Ser	Ser	Ile	Asn	Asp	Ser	Arg	Met	Ser	Thr	Lys	Thr	Thr	Ser	Ile	Leu
	290					295					300				
Lys	Leu	Pro	Thr	Lys	Ala	Pro	Gly	Leu	Ile	Pro	Tyr	Ile	Thr	Lys	Pro
305					310					315					320
Ser	Thr	Gln	Leu	Pro	Gly	Pro	Tyr	Cys	Pro	Ile	Pro	Cys	Asn	Cys	Lys
			325						330					335	
Val	Leu	Ser	Pro	Ser	Gly	Leu	Leu	Ile	His	Cys	Gln	Glu	Arg	Asn	Ile
		340						345					350		
Glu	Ser	Leu	Ser	Asp	Leu	Arg	Pro	Pro	Gln	Asn	Pro	Arg	Lys	Leu	
	355						360				365				
Ile	Leu	Ala	Gly	Asn	Ile	Ile	His	Ser	Leu	Met	Lys	Ser	Asp	Leu	Val
	370				375						380				
Glu	Tyr	Phe	Thr	Leu	Glu	Met	Leu	His	Leu	Gly	Asn	Asn	Arg	Ile	Glu
385					390					395					400
Val	Leu	Glu	Glu	Gly	Ser	Phe	Met	Asn	Leu	Thr	Arg	Leu	Gln	Lys	Leu
			405						410					415	
Tyr	Leu	Asn	Gly	Asn	His	Leu	Thr	Lys	Leu	Ser	Lys	Gly	Met	Phe	Leu
		420						425					430		
Gly	Leu	His	Asn	Leu	Glu	Tyr	Leu	Tyr	Leu	Glu	Tyr	Asn	Ala	Ile	Lys
	435						440					445			
Glu	Ile	Leu	Pro	Gly	Thr	Phe	Asn	Pro	Met	Pro	Lys	Leu	Lys	Val	Leu
	450					455					460				
Tyr	Leu	Asn	Asn	Asn	Leu	Leu	Gln	Val	Leu	Pro	Pro	His	Ile	Phe	Ser
465					470					475					480
Gly	Val	Pro	Leu	Thr	Lys	Val	Asn	Leu	Lys	Thr	Asn	Gln	Phe	Thr	His
			485						490					495	
Leu	Pro	Val	Ser	Asn	Ile	Leu	Asp	Asp	Leu	Asp	Leu	Leu	Thr	Gln	Ile
		500						505					510		
Asp	Leu	Glu	Asp	Asn	Pro	Trp	Asp	Cys	Ser	Cys	Asp	Leu	Val	Gly	Leu
	515						520					525			
Gln	Gln	Trp	Ile	Gln	Lys	Leu	Ser	Lys	Asn	Thr	Val	Thr	Asp	Asp	Ile
	530					535					540				
Leu	Cys	Thr	Ser	Pro	Gly	His	Leu	Asp	Lys	Lys	Glu	Leu	Lys	Ala	Leu
545					550					555					560
Asn	Ser	Glu	Ile	Leu	Cys	Pro	Gly	Leu	Val	Asn	Asn	Pro	Ser	Met	Pro
		565							570					575	
Thr	Gln	Thr	Ser	Tyr	Leu	Met	Val	Thr	Thr	Pro	Ala	Thr	Thr	Thr	Asn
		580						585					590		
Thr	Ala	Asp	Thr	Ile	Leu	Arg	Ser	Leu	Thr	Asp	Ala	Val	Pro	Leu	Ser
	595						600					605			
Val	Leu	Ile	Leu	Gly	Leu	Leu	Ile	Met	Phe	Ile	Thr	Ile	Val	Phe	Cys
	610					615					620				
Ala	Ala	Gly	Ile	Val	Val	Leu	Val	Leu	His	Arg	Arg	Arg	Arg	Tyr	Lys
625					630					635					640
Lys	Lys	Gln	Val	Asp	Glu	Gln	Met	Arg	Asp	Asn	Ser	Pro	Val	His	Leu
			645						650					655	

gca ttt aat ggc ctt ggc ctc ctg aaa caa ctt cat atc aat cac aat	388
Ala Phe Asn Gly Leu Gly Leu Leu Lys Gln Leu His Ile Asn His Asn	
110 115 120	
tct tta gaa att ctt aaa gag gat act ttc cat gga ctg gaa aac ctg	436
Ser Leu Glu Ile Leu Lys Glu Asp Thr Phe His Gly Leu Glu Asn Leu	
125 130 135	
gaa ttc ctg caa gca gat aac aat ttt atc aca gtg att gaa cca agt	484
Glu Phe Leu Gln Ala Asp Asn Asn Phe Ile Thr Val Ile Glu Pro Ser	
140 145 150	
gcc ttt agc aag ctc aac aga ctc aaa gtg tta att tta aat gac aat	532
Ala Phe Ser Lys Leu Asn Arg Leu Lys Val Leu Ile Leu Asn Asp Asn	
155 160 165 170	
gct att gag agt ctt cct cca aac atc ttc cga ttt gtt cct tta acc	580
Ala Ile Glu Ser Leu Pro Pro Asn Ile Phe Arg Phe Val Pro Leu Thr	
175 180 185	
cat cta gat ctt cgt gga aat caa tta caa aca ttg cct tat gtt ggt	628
His Leu Asp Leu Arg Gly Asn Gln Leu Gln Thr Leu Pro Tyr Val Gly	
190 195 200	
ttt ctc gaa cac att ggc cga ata ttg gat ctt cag ttg gag gac aac	676
Phe Leu Glu His Ile Gly Arg Ile Leu Asp Leu Gln Leu Glu Asp Asn	
205 210 215	
aaa tgg gcc tgc aat tgt gac tta ttg cag tta aaa act tgg ttg gag	724
Lys Trp Ala Cys Asn Cys Asp Leu Leu Gln Leu Lys Thr Trp Leu Glu	
220 225 230	
aac atg cct cca cag tct ata att ggt gat gtt gtc tgc aac agc cct	772
Asn Met Pro Pro Gln Ser Ile Ile Gly Asp Val Val Cys Asn Ser Pro	
235 240 245 250	
cca ttt ttt aaa gga agt ata ctc agt aga cta aag aag gaa tct att	820
Pro Phe Phe Lys Gly Ser Ile Leu Ser Arg Leu Lys Lys Glu Ser Ile	
255 260 265	
tgc cct act cca cca gtg tat gaa gaa cat gag gat cct tca gga tca	868
Cys Pro Thr Pro Pro Val Tyr Glu Glu His Glu Asp Pro Ser Gly Ser	
270 275 280	
tta cat ctg gca gca aca tct tca ata aat gat agt cgc atg tca act	916
Leu His Leu Ala Ala Thr Ser Ser Ile Asn Asp Ser Arg Met Ser Thr	
285 290 295	
aag acc acg tcc att cta aaa cta ccc acc aaa gca cca ggt ttg ata	964
Lys Thr Thr Ser Ile Leu Lys Leu Pro Thr Lys Ala Pro Gly Leu Ile	
300 305 310	
cct tat att aca aag cca tcc act caa ctt cca gga cct tac tgc cct	1012
Pro Tyr Ile Thr Lys Pro Ser Thr Gln Leu Pro Gly Pro Tyr Cys Pro	
315 320 325 330	
att cct tgt aac tgc aaa gtc cta tcc cca tca gga ctt cta ata cat	1060
Ile Pro Cys Asn Cys Lys Val Leu Ser Pro Ser Gly Leu Leu Ile His	
335 340 345	
tgt cag gag cgc aac att gaa agc tta tca gat ctg aga cct cct ccg	1108
Cys Gln Glu Arg Asn Ile Glu Ser Leu Ser Asp Leu Arg Pro Pro Pro	
350 355 360	

caa aat cct aga aag ctc att cta gcg gga aat att att cac agt tta	1156
Gln Asn Pro Arg Lys Leu Ile Leu Ala Gly Asn Ile Ile His Ser Leu	
365 370 375	
atg aat cca tcc ttt ggt cca aag cat ctg gaa gag gaa gaa gag agg	1204
Met Asn Pro Ser Phe Gly Pro Lys His Leu Glu Glu Glu Glu Arg	
380 385 390	
aat gag aaa gaa gga agt gat gca aaa cat ctc caa aga agt ctt ttg	1252
Asn Glu Lys Glu Gly Ser Asp Ala Lys His Leu Gln Arg Ser Leu Leu	
395 400 405 410	
gaa cag gaa aat cat tca cca ctc aca ggg tca aat atg aaa tac aaa	1300
Glu Gln Glu Asn His Ser Pro Leu Thr Gly Ser Asn Met Lys Tyr Lys	
415 420 425	
acc acg aac caa tca aca gaa ttt tta tcc ttc caa gat gcc agc tca	1348
Thr Thr Asn Gln Ser Thr Glu Phe Leu Ser Phe Gln Asp Ala Ser Ser	
430 435 440	
ttg tac aga aac att tta gaa aaa gaa agg gaa ctt cag caa ctg gga	1396
Leu Tyr Arg Asn Ile Leu Glu Lys Glu Arg Glu Leu Gln Gln Leu Gly	
445 450 455	
atc aca gaa tac cta agg aaa aac att gct cag ctc cag cct gat atg	1444
Ile Thr Glu Tyr Leu Arg Lys Asn Ile Ala Gln Leu Gln Pro Asp Met	
460 465 470	
gag gca cat tat cct gga gcc cac gaa gag ctg aag tta atg gaa aca	1492
Glu Ala His Tyr Pro Gly Ala His Glu Glu Leu Lys Leu Met Glu Thr	
475 480 485 490	
tta atg tac tca cgt cca agg aag gta tta gtg gaa cag aca aaa aat	1540
Leu Met Tyr Ser Arg Pro Arg Lys Val Leu Val Glu Gln Thr Lys Asn	
495 500 505	
gag tat ttt gaa ctt aaa gct aat tta cat gct gaa cct gac tat tta	1588
Glu Tyr Phe Glu Leu Lys Ala Asn Leu His Ala Glu Pro Asp Tyr Leu	
510 515 520	
gaa gtc ctg gag cag caa aca tag atggaga	1619
Glu Val Leu Glu Gln Gln Thr *	
525	

<210> 13
 <211> 529
 <212> PRT
 <213> Homo sapiens

<400> 13
 Met Lys Leu Trp Ile His Leu Phe Tyr Ser Ser Leu Leu Ala Cys Ile
 1 5 10 15
 Ser Leu His Ser Gln Thr Pro Val Leu Ser Ser Arg Gly Ser Cys Asp
 20 25 30
 Ser Leu Cys Asn Cys Glu Glu Lys Asp Gly Thr Met Leu Ile Asn Cys
 35 40 45
 Glu Ala Lys Gly Ile Lys Met Val Ser Glu Ile Ser Val Pro Pro Ser
 50 55 60
 Arg Pro Phe Gln Leu Ser Leu Leu Asn Asn Gly Leu Thr Met Leu His
 65 70 75 80
 Thr Asn Asp Phe Ser Gly Leu Thr Asn Ala Ile Ser Ile His Leu Gly
 85 90 95
 Phe Asn Asn Ile Ala Asp Ile Glu Ile Gly Ala Phe Asn Gly Leu Gly

			100					105					110				
Leu	Leu	Lys	Gln	Leu	His	Ile	Asn	His	Asn	Ser	Leu	Glu	Ile	Leu	Lys		
		115					120					125					
Glu	Asp	Thr	Phe	His	Gly	Leu	Glu	Asn	Leu	Glu	Phe	Leu	Gln	Ala	Asp		
	130					135					140						
Asn	Asn	Phe	Ile	Thr	Val	Ile	Glu	Pro	Ser	Ala	Phe	Ser	Lys	Leu	Asn		
145					150				155						160		
Arg	Leu	Lys	Val	Leu	Ile	Leu	Asn	Asp	Asn	Ala	Ile	Glu	Ser	Leu	Pro		
			165						170						175		
Pro	Asn	Ile	Phe	Arg	Phe	Val	Pro	Leu	Thr	His	Leu	Asp	Leu	Arg	Gly		
		180					185						190				
Asn	Gln	Leu	Gln	Thr	Leu	Pro	Tyr	Val	Gly	Phe	Leu	Glu	His	Ile	Gly		
	195						200					205					
Arg	Ile	Leu	Asp	Leu	Gln	Leu	Glu	Asp	Asn	Lys	Trp	Ala	Cys	Asn	Cys		
	210					215					220						
Asp	Leu	Leu	Gln	Leu	Lys	Thr	Trp	Leu	Glu	Asn	Met	Pro	Pro	Gln	Ser		
225					230					235					240		
Ile	Ile	Gly	Asp	Val	Val	Cys	Asn	Ser	Pro	Pro	Phe	Phe	Lys	Gly	Ser		
			245						250					255			
Ile	Leu	Ser	Arg	Leu	Lys	Lys	Glu	Ser	Ile	Cys	Pro	Thr	Pro	Pro	Val		
		260					265						270				
Tyr	Glu	Glu	His	Glu	Asp	Pro	Ser	Gly	Ser	Leu	His	Leu	Ala	Ala	Thr		
	275					280						285					
Ser	Ser	Ile	Asn	Asp	Ser	Arg	Met	Ser	Thr	Lys	Thr	Thr	Ser	Ile	Leu		
	290				295						300						
Lys	Leu	Pro	Thr	Lys	Ala	Pro	Gly	Leu	Ile	Pro	Tyr	Ile	Thr	Lys	Pro		
305					310					315					320		
Ser	Thr	Gln	Leu	Pro	Gly	Pro	Tyr	Cys	Pro	Ile	Pro	Cys	Asn	Cys	Lys		
			325					330						335			
Val	Leu	Ser	Pro	Ser	Gly	Leu	Leu	Ile	His	Cys	Gln	Glu	Arg	Asn	Ile		
		340					345						350				
Glu	Ser	Leu	Ser	Asp	Leu	Arg	Pro	Pro	Pro	Gln	Asn	Pro	Arg	Lys	Leu		
	355						360					365					
Ile	Leu	Ala	Gly	Asn	Ile	Ile	His	Ser	Leu	Met	Asn	Pro	Ser	Phe	Gly		
	370					375					380						
Pro	Lys	His	Leu	Glu	Glu	Glu	Glu	Arg	Asn	Glu	Lys	Glu	Gly	Ser			
385					390				395					400			
Asp	Ala	Lys	His	Leu	Gln	Arg	Ser	Leu	Leu	Glu	Gln	Glu	Asn	His	Ser		
			405					410						415			
Pro	Leu	Thr	Gly	Ser	Asn	Met	Lys	Tyr	Lys	Thr	Thr	Asn	Gln	Ser	Thr		
		420						425					430				
Glu	Phe	Leu	Ser	Phe	Gln	Asp	Ala	Ser	Ser	Leu	Tyr	Arg	Asn	Ile	Leu		
	435					440						445					
Glu	Lys	Glu	Arg	Glu	Leu	Gln	Leu	Gly	Ile	Thr	Glu	Tyr	Leu	Arg			
	450					455				460							
Lys	Asn	Ile	Ala	Gln	Leu	Gln	Pro	Asp	Met	Glu	Ala	His	Tyr	Pro	Gly		
465					470				475					480			
Ala	His	Glu	Glu	Leu	Lys	Leu	Met	Glu	Thr	Leu	Met	Tyr	Ser	Arg	Pro		
			485					490						495			
Arg	Lys	Val	Leu	Val	Glu	Gln	Thr	Lys	Asn	Glu	Tyr	Phe	Glu	Leu	Lys		
		500					505						510				
Ala	Asn	Leu	His	Ala	Glu	Pro	Asp	Tyr	Leu	Glu	Val	Leu	Glu	Gln	Gln		
	515						520					525					

Thr

<210> 14
 <211> 841
 <212> PRT
 <213> Homo sapiens

<400> 14
 Met Lys Leu Trp Ile His Leu Phe Tyr Ser Ser Leu Leu Ala Cys Ile

1				5					10					15		
Ser	Leu	His	Ser	Gln	Thr	Pro	Val	Leu	Ser	Ser	Arg	Gly	Ser	Cys	Asp	
			20					25					30			
Ser	Leu	Cys	Asn	Cys	Glu	Glu	Lys	Asp	Gly	Thr	Met	Leu	Ile	Asn	Cys	
		35					40					45				
Glu	Ala	Lys	Gly	Ile	Lys	Met	Val	Ser	Glu	Ile	Ser	Val	Pro	Pro	Ser	
	50					55					60					
Arg	Pro	Phe	Gln	Leu	Ser	Leu	Leu	Asn	Asn	Gly	Leu	Thr	Met	Leu	His	
65				70						75					80	
Thr	Asn	Asp	Phe	Ser	Gly	Leu	Thr	Asn	Ala	Ile	Ser	Ile	His	Leu	Gly	
				85					90					95		
Phe	Asn	Asn	Ile	Ala	Asp	Ile	Glu	Ile	Gly	Ala	Phe	Asn	Gly	Leu	Gly	
			100					105					110			
Leu	Leu	Lys	Gln	Leu	His	Ile	Asn	His	Asn	Ser	Leu	Glu	Ile	Leu	Lys	
		115					120					125				
Glu	Asp	Thr	Phe	His	Gly	Leu	Glu	Asn	Leu	Glu	Phe	Leu	Gln	Ala	Asp	
	130					135					140					
Asn	Asn	Phe	Ile	Thr	Val	Ile	Glu	Pro	Ser	Ala	Phe	Ser	Lys	Leu	Asn	
145				150						155					160	
Arg	Leu	Lys	Val	Leu	Ile	Leu	Asn	Asp	Asn	Ala	Ile	Glu	Ser	Leu	Pro	
			165					170						175		
Pro	Asn	Ile	Phe	Arg	Phe	Val	Pro	Leu	Thr	His	Leu	Asp	Leu	Arg	Gly	
			180					185					190			
Asn	Gln	Leu	Gln	Thr	Leu	Pro	Tyr	Val	Gly	Phe	Leu	Glu	His	Ile	Gly	
		195					200					205				
Arg	Ile	Leu	Asp	Leu	Gln	Leu	Glu	Asp	Asn	Lys	Trp	Ala	Cys	Asn	Cys	
	210					215					220					
Asp	Leu	Leu	Gln	Leu	Lys	Thr	Trp	Leu	Glu	Asn	Met	Pro	Pro	Gln	Ser	
225				230					235					240		
Ile	Ile	Gly	Asp	Val	Val	Cys	Asn	Ser	Pro	Pro	Phe	Phe	Lys	Gly	Ser	
			245						250					255		
Ile	Leu	Ser	Arg	Leu	Lys	Lys	Glu	Ser	Ile	Cys	Pro	Thr	Pro	Pro	Val	
		260						265					270			
Tyr	Glu	Glu	His	Glu	Asp	Pro	Ser	Gly	Ser	Leu	His	Leu	Ala	Ala	Thr	
	275						280					285				
Ser	Ser	Ile	Asn	Asp	Ser	Arg	Met	Ser	Thr	Lys	Thr	Thr	Ser	Ile	Leu	
	290					295					300					
Lys	Leu	Pro	Thr	Lys	Ala	Pro	Gly	Leu	Ile	Pro	Tyr	Ile	Thr	Lys	Pro	
305				310					315					320		
Ser	Thr	Gln	Leu	Pro	Gly	Pro	Tyr	Cys	Pro	Ile	Pro	Cys	Asn	Cys	Lys	
			325						330					335		
Val	Leu	Ser	Pro	Ser	Gly	Leu	Leu	Ile	His	Cys	Gln	Glu	Arg	Asn	Ile	
		340						345					350			
Glu	Ser	Leu	Ser	Asp	Leu	Arg	Pro	Pro	Gln	Asn	Pro	Arg	Lys	Leu		
	355						360					365				
Ile	Leu	Ala	Gly	Asn	Ile	Ile	His	Ser	Leu	Met	Lys	Ser	Asp	Leu	Val	
	370				375					380						
Glu	Tyr	Phe	Thr	Leu	Glu	Met	Leu	His	Leu	Gly	Asn	Asn	Arg	Ile	Glu	
385				390						395				400		
Val	Leu	Glu	Glu	Gly	Ser	Phe	Met	Asn	Leu	Thr	Arg	Leu	Gln	Lys	Leu	
			405						410					415		
Tyr	Leu	Asn	Gly	Asn	His	Leu	Thr	Lys	Leu	Ser	Lys	Gly	Met	Phe	Leu	
		420						425					430			
Gly	Leu	His	Asn	Leu	Glu	Tyr	Leu	Tyr	Leu	Glu	Tyr	Asn	Ala	Ile	Lys	
	435						440					445				
Glu	Ile	Leu	Pro	Gly	Thr	Phe	Asn	Pro	Met	Pro	Lys	Leu	Lys	Val	Leu	
	450					455					460					
Tyr	Leu	Asn	Asn	Asn	Leu	Leu	Gln	Val	Leu	Pro	Pro	His	Ile	Phe	Ser	
465					470					475				480		
Gly	Val	Pro	Leu	Thr	Lys	Val	Asn	Leu	Lys	Thr	Asn	Gln	Phe	Thr	His	
			485						490					495		
Leu	Pro	Val	Ser	Asn	Ile	Leu	Asp	Asp	Leu	Asp	Leu	Leu	Thr	Gln	Ile	
			500					505					510			
Asp	Leu	Glu	Asp	Asn	Pro	Trp	Asp	Cys	Ser	Cys	Asp	Leu	Val	Gly	Leu	

625					630					635					640
Lys	Lys	Gln	Val	Asp	Glu	Gln	Met	Arg	Asp	Asn	Ser	Pro	Val	His	Leu
				645					650					655	
Gln	Tyr	Ser	Met	Tyr	Gly	His	Lys	Thr	Thr	His	His	Thr	Thr	Glu	Arg
			660					665					670		
Pro	Ser	Ala	Ser	Leu	Tyr	Glu	Gln	His	Met	Gly	Ala	His	Glu	Glu	Leu
		675					680					685			
Lys	Leu	Met	Glu	Thr	Leu	Met	Tyr	Ser	Arg	Pro	Arg	Lys	Val	Leu	Val
	690					695					700				
Glu	Gln	Thr	Lys	Asn	Glu	Tyr	Phe	Glu	Leu	Lys	Ala	Asn	Leu	His	Ala
705					710					715					720
Glu	Pro	Asp	Tyr	Leu	Glu	Val	Leu	Glu	Gln	Gln	Thr				
				725					730						

<210> 16
 <211> 390
 <212> PRT
 <213> Homo sapiens

<400> 16

Met	Lys	Leu	Trp	Ile	His	Leu	Phe	Tyr	Ser	Ser	Leu	Leu	Ala	Cys	Ile
1				5					10					15	
Ser	Leu	His	Ser	Gln	Thr	Pro	Val	Leu	Ser	Ser	Arg	Gly	Ser	Cys	Asp
			20					25				30			
Ser	Leu	Cys	Asn	Cys	Glu	Glu	Lys	Asp	Gly	Thr	Met	Leu	Ile	Asn	Cys
		35					40					45			
Glu	Ala	Lys	Gly	Ile	Lys	Met	Val	Ser	Glu	Ile	Ser	Val	Pro	Pro	Ser
	50					55					60				
Arg	Pro	Phe	Gln	Leu	Ser	Leu	Leu	Asn	Asn	Gly	Leu	Thr	Met	Leu	His
65				70					75						80
Thr	Asn	Asp	Phe	Ser	Gly	Leu	Thr	Asn	Ala	Ile	Ser	Ile	His	Leu	Gly
			85					90					95		
Phe	Asn	Asn	Ile	Ala	Asp	Ile	Glu	Ile	Gly	Ala	Phe	Asn	Gly	Leu	Gly
			100				105						110		
Leu	Leu	Lys	Gln	Leu	His	Ile	Asn	His	Asn	Ser	Leu	Glu	Ile	Leu	Lys
		115				120						125			
Glu	Asp	Thr	Phe	His	Gly	Leu	Glu	Asn	Leu	Glu	Phe	Leu	Gln	Ala	Asp
	130					135					140				
Asn	Asn	Phe	Ile	Thr	Val	Ile	Glu	Pro	Ser	Ala	Phe	Ser	Lys	Leu	Asn
145					150					155					160
Arg	Leu	Lys	Val	Leu	Ile	Leu	Asn	Asp	Asn	Ala	Ile	Glu	Ser	Leu	Pro
			165					170						175	
Pro	Asn	Ile	Phe	Arg	Phe	Val	Pro	Leu	Thr	His	Leu	Asp	Leu	Arg	Gly
		180					185						190		
Asn	Gln	Leu	Gln	Thr	Leu	Pro	Tyr	Val	Gly	Phe	Leu	Glu	His	Ile	Gly
		195				200						205			
Arg	Ile	Leu	Asp	Leu	Gln	Leu	Glu	Asp	Asn	Lys	Trp	Ala	Cys	Asn	Cys
	210				215						220				
Asp	Leu	Leu	Gln	Leu	Lys	Thr	Trp	Leu	Glu	Asn	Met	Pro	Pro	Gln	Ser
225					230					235					240
Ile	Ile	Gly	Asp	Val	Val	Cys	Asn	Ser	Pro	Pro	Phe	Phe	Lys	Gly	Ser
			245						250					255	
Ile	Leu	Ser	Arg	Leu	Lys	Lys	Glu	Ser	Ile	Cys	Pro	Thr	Pro	Pro	Val
		260					265						270		
Tyr	Glu	Glu	His	Glu	Asp	Pro	Ser	Gly	Ser	Leu	His	Leu	Ala	Ala	Thr
	275					280						285			
Ser	Ser	Ile	Asn	Asp	Ser	Arg	Met	Ser	Thr	Lys	Thr	Thr	Ser	Ile	Leu
	290				295						300				
Lys	Leu	Pro	Thr	Lys	Ala	Pro	Gly	Leu	Ile	Pro	Tyr	Ile	Thr	Lys	Pro
305					310					315					320
Ser	Thr	Gln	Leu	Pro	Gly	Pro	Tyr	Cys	Pro	Ile	Pro	Cys	Asn	Cys	Lys
			325					330						335	
Val	Leu	Ser	Pro	Ser	Gly	Leu	Leu	Ile	His	Cys	Gln	Glu	Arg	Asn	Ile

		340						345					350				
Glu	Ser	Leu	Ser	Asp	Leu	Arg	Pro	Pro	Pro	Gln	Asn	Pro	Arg	Lys	Leu		
		355					360					365					
Ile	Leu	Ala	Gly	Asn	Ile	Ile	His	Ser	Leu	Met	Lys	Ser	Ile	Leu	Trp		
		370				375					380						
Ser	Lys	Ala	Ser	Gly	Arg												
385					390												

<210> 17
 <211> 529
 <212> PRT
 <213> Homo sapiens

<400> 17

Met	Lys	Leu	Trp	Ile	His	Leu	Phe	Tyr	Ser	Ser	Leu	Leu	Ala	Cys	Ile		
1				5					10					15			
Ser	Leu	His	Ser	Gln	Thr	Pro	Val	Leu	Ser	Ser	Arg	Gly	Ser	Cys	Asp		
			20					25					30				
Ser	Leu	Cys	Asn	Cys	Glu	Glu	Lys	Asp	Gly	Thr	Met	Leu	Ile	Asn	Cys		
		35					40					45					
Glu	Ala	Lys	Gly	Ile	Lys	Met	Val	Ser	Glu	Ile	Ser	Val	Pro	Pro	Ser		
	50					55					60						
Arg	Pro	Phe	Gln	Leu	Ser	Leu	Leu	Asn	Asn	Gly	Leu	Thr	Met	Leu	His		
65					70				75						80		
Thr	Asn	Asp	Phe	Ser	Gly	Leu	Thr	Asn	Ala	Ile	Ser	Ile	His	Leu	Gly		
			85					90						95			
Phe	Asn	Asn	Ile	Ala	Asp	Ile	Glu	Ile	Gly	Ala	Phe	Asn	Gly	Leu	Gly		
			100					105					110				
Leu	Leu	Lys	Gln	Leu	His	Ile	Asn	His	Asn	Ser	Leu	Glu	Ile	Leu	Lys		
		115					120					125					
Glu	Asp	Thr	Phe	His	Gly	Leu	Glu	Asn	Leu	Glu	Phe	Leu	Gln	Ala	Asp		
	130					135					140						
Asn	Asn	Phe	Ile	Thr	Val	Ile	Glu	Pro	Ser	Ala	Phe	Ser	Lys	Leu	Asn		
145					150					155					160		
Arg	Leu	Lys	Val	Leu	Ile	Leu	Asn	Asp	Asn	Ala	Ile	Glu	Ser	Leu	Pro		
			165					170						175			
Pro	Asn	Ile	Phe	Arg	Phe	Val	Pro	Leu	Thr	His	Leu	Asp	Leu	Arg	Gly		
			180					185						190			
Asn	Gln	Leu	Gln	Thr	Leu	Pro	Tyr	Val	Gly	Phe	Leu	Glu	His	Ile	Gly		
	195						200					205					
Arg	Ile	Leu	Asp	Leu	Gln	Leu	Glu	Asp	Asn	Lys	Trp	Ala	Cys	Asn	Cys		
	210					215					220						
Asp	Leu	Leu	Gln	Leu	Lys	Thr	Trp	Leu	Glu	Asn	Met	Pro	Pro	Gln	Ser		
225					230					235					240		
Ile	Ile	Gly	Asp	Val	Val	Cys	Asn	Ser	Pro	Pro	Phe	Phe	Lys	Gly	Ser		
			245					250						255			
Ile	Leu	Ser	Arg	Leu	Lys	Lys	Glu	Ser	Ile	Cys	Pro	Thr	Pro	Pro	Val		
			260					265					270				
Tyr	Glu	Glu	His	Glu	Asp	Pro	Ser	Gly	Ser	Leu	His	Leu	Ala	Ala	Thr		
	275						280					285					
Ser	Ser	Ile	Asn	Asp	Ser	Arg	Met	Ser	Thr	Lys	Thr	Thr	Ser	Ile	Leu		
	290					295					300						
Lys	Leu	Pro	Thr	Lys	Ala	Pro	Gly	Leu	Ile	Pro	Tyr	Ile	Thr	Lys	Pro		
305					310					315					320		
Ser	Thr	Gln	Leu	Pro	Gly	Pro	Tyr	Cys	Pro	Ile	Pro	Cys	Asn	Cys	Lys		
			325					330						335			
Val	Leu	Ser	Pro	Ser	Gly	Leu	Leu	Ile	His	Cys	Gln	Glu	Arg	Asn	Ile		
			340					345					350				
Glu	Ser	Leu	Ser	Asp	Leu	Arg	Pro	Pro	Pro	Gln	Asn	Pro	Arg	Lys	Leu		
	355						360					365					
Ile	Leu	Ala	Gly	Asn	Ile	Ile	His	Ser	Leu	Met	Asn	Pro	Ser	Phe	Gly		
	370					375					380						
Pro	Lys	His	Leu	Glu	Glu	Glu	Glu	Glu	Arg	Asn	Glu	Lys	Glu	Gly	Ser		

385					390					395					400
Asp	Ala	Lys	His	Leu	Gln	Arg	Ser	Leu	Leu	Glu	Gln	Glu	Asn	His	Ser
				405					410					415	
Pro	Leu	Thr	Gly	Ser	Asn	Met	Lys	Tyr	Lys	Thr	Thr	Asn	Gln	Ser	Thr
			420					425					430		
Glu	Phe	Leu	Ser	Phe	Gln	Asp	Ala	Ser	Ser	Leu	Tyr	Arg	Asn	Ile	Leu
		435					440					445			
Glu	Lys	Glu	Arg	Glu	Leu	Gln	Gln	Leu	Gly	Ile	Thr	Glu	Tyr	Leu	Arg
	450					455				460					
Lys	Asn	Ile	Ala	Gln	Leu	Gln	Pro	Asp	Met	Glu	Ala	His	Tyr	Pro	Gly
465					470				475						480
Ala	His	Glu	Glu	Leu	Lys	Leu	Met	Glu	Thr	Leu	Met	Tyr	Ser	Arg	Pro
				485				490						495	
Arg	Lys	Val	Leu	Val	Glu	Gln	Thr	Lys	Asn	Glu	Tyr	Phe	Glu	Leu	Lys
			500					505					510		
Ala	Asn	Leu	His	Ala	Glu	Pro	Asp	Tyr	Leu	Glu	Val	Leu	Glu	Gln	Gln
		515					520					525			
Thr															

<210> 18
 <211> 798
 <212> PRT
 <213> Homo sapiens

<400> 18

Met	Leu	Ile	Asn	Cys	Glu	Ala	Lys	Gly	Ile	Lys	Met	Val	Ser	Glu	Ile
1				5					10					15	
Ser	Val	Pro	Pro	Ser	Arg	Pro	Phe	Gln	Leu	Ser	Leu	Leu	Asn	Asn	Gly
			20					25					30		
Leu	Thr	Met	Leu	His	Thr	Asn	Asp	Phe	Ser	Gly	Leu	Thr	Asn	Ala	Ile
		35				40					45				
Ser	Ile	His	Leu	Gly	Phe	Asn	Asn	Ile	Ala	Asp	Ile	Glu	Ile	Gly	Ala
	50					55				60					
Phe	Asn	Gly	Leu	Gly	Leu	Lys	Gln	Leu	His	Ile	Asn	His	Asn	Ser	
65					70				75					80	
Leu	Glu	Ile	Leu	Lys	Glu	Asp	Thr	Phe	His	Gly	Leu	Glu	Asn	Leu	Glu
			85					90						95	
Phe	Leu	Gln	Ala	Asp	Asn	Asn	Phe	Ile	Thr	Val	Ile	Glu	Pro	Ser	Ala
			100				105						110		
Phe	Ser	Lys	Leu	Asn	Arg	Leu	Lys	Val	Leu	Ile	Leu	Asn	Asp	Asn	Ala
		115					120					125			
Ile	Glu	Ser	Leu	Pro	Pro	Asn	Ile	Phe	Arg	Phe	Val	Pro	Leu	Thr	His
	130					135					140				
Leu	Asp	Leu	Arg	Gly	Asn	Gln	Leu	Gln	Thr	Leu	Pro	Tyr	Val	Gly	Phe
145					150				155						160
Leu	Glu	His	Ile	Gly	Arg	Ile	Leu	Asp	Leu	Gln	Leu	Glu	Asp	Asn	Lys
				165				170						175	
Trp	Ala	Cys	Asn	Cys	Asp	Leu	Leu	Gln	Leu	Lys	Thr	Trp	Leu	Glu	Asn
			180					185					190		
Met	Pro	Pro	Gln	Ser	Ile	Ile	Gly	Asp	Val	Val	Cys	Asn	Ser	Pro	Pro
		195					200					205			
Phe	Phe	Lys	Gly	Ser	Ile	Leu	Ser	Arg	Leu	Lys	Lys	Glu	Ser	Ile	Cys
	210					215					220				
Pro	Thr	Pro	Pro	Val	Tyr	Glu	Glu	His	Glu	Asp	Pro	Ser	Gly	Ser	Leu
225					230				235						240
His	Leu	Ala	Ala	Thr	Ser	Ser	Ile	Asn	Asp	Ser	Arg	Met	Ser	Thr	Lys
				245				250						255	
Thr	Thr	Ser	Ile	Leu	Lys	Leu	Pro	Thr	Lys	Ala	Pro	Gly	Leu	Ile	Pro
			260					265					270		
Tyr	Ile	Thr	Lys	Pro	Ser	Thr	Gln	Leu	Pro	Gly	Pro	Tyr	Cys	Pro	Ile
		275					280					285			
Pro	Cys	Asn	Cys	Lys	Val	Leu	Ser	Pro	Ser	Gly	Leu	Leu	Ile	His	Cys

290		295		300
Gln Glu Arg Asn Ile Glu Ser Leu Ser Asp Leu Arg Pro Pro Pro Gln				
305		310		315
Asn Pro Arg Lys Leu Ile Leu Ala Gly Asn Ile Ile His Ser Leu Met				
	325		330	335
Lys Ser Asp Leu Val Glu Tyr Phe Thr Leu Glu Met Leu His Leu Gly				
	340		345	350
Asn Asn Arg Ile Glu Val Leu Glu Gly Ser Phe Met Asn Leu Thr				
	355		360	365
Arg Leu Gln Lys Leu Tyr Leu Asn Gly Asn His Leu Thr Lys Leu Ser				
	370		375	380
Lys Gly Met Phe Leu Gly Leu His Asn Leu Glu Tyr Leu Tyr Leu Glu				
385		390		395
Tyr Asn Ala Ile Lys Glu Ile Leu Pro Gly Thr Phe Asn Pro Met Pro				
	405		410	415
Lys Leu Lys Val Leu Tyr Leu Asn Asn Asn Leu Leu Gln Val Leu Pro				
	420		425	430
Pro His Ile Phe Ser Gly Val Pro Leu Thr Lys Val Asn Leu Lys Thr				
	435		440	445
Asn Gln Phe Thr His Leu Pro Val Ser Asn Ile Leu Asp Asp Leu Asp				
	450		455	460
Leu Leu Thr Gln Ile Asp Leu Glu Asp Asn Pro Trp Asp Cys Ser Cys				
465		470		475
Asp Leu Val Gly Leu Gln Gln Trp Ile Gln Lys Leu Ser Lys Asn Thr				
	485		490	495
Val Thr Asp Asp Ile Leu Cys Thr Ser Pro Gly His Leu Asp Lys Lys				
	500		505	510
Glu Leu Lys Ala Leu Asn Ser Glu Ile Leu Cys Pro Gly Leu Val Asn				
	515		520	525
Asn Pro Ser Met Pro Thr Gln Thr Ser Tyr Leu Met Val Thr Thr Pro				
	530		535	540
Ala Thr Thr Thr Asn Thr Ala Asp Thr Ile Leu Arg Ser Leu Thr Asp				
545		550		555
Ala Val Pro Leu Ser Val Leu Ile Leu Gly Leu Leu Ile Met Phe Ile				
	565		570	575
Thr Ile Val Phe Cys Ala Ala Gly Ile Val Val Leu Val Leu His Arg				
	580		585	590
Arg Arg Arg Tyr Lys Lys Lys Gln Val Asp Glu Gln Met Arg Asp Asn				
	595		600	605
Ser Pro Val His Leu Gln Tyr Ser Met Tyr Gly His Lys Thr Thr His				
	610		615	620
His Thr Thr Glu Arg Pro Ser Ala Ser Leu Tyr Glu Gln His Met Val				
625		630		635
Ser Pro Met Val His Val Tyr Arg Ser Pro Ser Phe Gly Pro Lys His				
	645		650	655
Leu Glu Glu Glu Glu Glu Arg Asn Glu Lys Glu Gly Ser Asp Ala Lys				
	660		665	670
His Leu Gln Arg Ser Leu Leu Glu Gln Glu Asn His Ser Pro Leu Thr				
	675		680	685
Gly Ser Asn Met Lys Tyr Lys Thr Thr Asn Gln Ser Thr Glu Phe Leu				
	690		695	700
Ser Phe Gln Asp Ala Ser Ser Leu Tyr Arg Asn Ile Leu Glu Lys Glu				
705		710		715
Arg Glu Leu Gln Gln Leu Gly Ile Thr Glu Tyr Leu Arg Lys Asn Ile				
	725		730	735
Ala Gln Leu Gln Pro Asp Met Glu Ala His Tyr Pro Gly Ala His Glu				
	740		745	750
Glu Leu Lys Leu Met Glu Thr Leu Met Tyr Ser Arg Pro Arg Lys Val				
	755		760	765
Leu Val Glu Gln Thr Lys Asn Glu Tyr Phe Glu Leu Lys Ala Asn Leu				
	770		775	780
His Ala Glu Pro Asp Tyr Leu Glu Val Leu Glu Gln Gln Thr				
785		790		795

<210> 19
 <211> 798
 <212> PRT
 <213> Homo sapiens

<400> 19
 Met Leu Ile Asn Cys Glu Ala Lys Gly Ile Lys Met Val Ser Glu Ile
 1 5 10 15
 Ser Val Pro Pro Ser Arg Pro Phe Gln Leu Ser Leu Leu Asn Asn Gly
 20 25 30
 Leu Thr Met Leu His Thr Asn Asp Phe Ser Gly Leu Thr Asn Ala Ile
 35 40 45
 Ser Ile His Leu Gly Phe Asn Asn Ile Ala Asp Ile Glu Ile Gly Ala
 50 55 60
 Phe Asn Gly Leu Gly Leu Leu Lys Gln Leu His Ile Asn His Asn Ser
 65 70 75 80
 Leu Glu Ile Leu Lys Glu Asp Thr Phe His Gly Leu Glu Asn Leu Glu
 85 90 95
 Phe Leu Gln Ala Asp Asn Asn Phe Ile Thr Val Ile Glu Pro Ser Ala
 100 105 110
 Phe Ser Lys Leu Asn Arg Leu Lys Val Leu Ile Leu Asn Asp Asn Ala
 115 120 125
 Ile Glu Ser Leu Pro Pro Asn Ile Phe Arg Phe Val Pro Leu Thr His
 130 135 140
 Leu Asp Leu Arg Gly Asn Gln Leu Gln Thr Leu Pro Tyr Val Gly Phe
 145 150 155 160
 Leu Glu His Ile Gly Arg Ile Leu Asp Leu Gln Leu Glu Asp Asn Lys
 165 170 175
 Trp Ala Cys Asn Cys Asp Leu Leu Gln Leu Lys Thr Trp Leu Glu Asn
 180 185 190
 Met Pro Pro Gln Ser Ile Ile Gly Asp Val Val Cys Asn Ser Pro Pro
 195 200 205
 Phe Phe Lys Gly Ser Ile Leu Ser Arg Leu Lys Lys Glu Ser Ile Cys
 210 215 220
 Pro Thr Pro Pro Val Tyr Glu Glu His Glu Asp Pro Ser Gly Ser Leu
 225 230 235 240
 His Leu Ala Ala Thr Ser Ser Ile Asn Asp Ser Arg Met Ser Thr Lys
 245 250 255
 Thr Thr Ser Ile Leu Lys Leu Pro Thr Lys Ala Pro Gly Leu Ile Pro
 260 265 270
 Tyr Ile Thr Lys Pro Ser Thr Gln Leu Pro Gly Pro Tyr Cys Pro Ile
 275 280 285
 Pro Cys Asn Cys Lys Val Leu Ser Pro Ser Gly Leu Leu Ile His Cys
 290 295 300
 Gln Glu Arg Asn Ile Glu Ser Leu Ser Asp Leu Arg Pro Pro Pro Gln
 305 310 315 320
 Asn Pro Arg Lys Leu Ile Leu Ala Gly Asn Ile Ile His Ser Leu Met
 325 330 335
 Lys Ser Asp Leu Val Glu Tyr Phe Thr Leu Glu Met Leu His Leu Gly
 340 345 350
 Asn Asn Arg Ile Glu Val Leu Glu Glu Gly Ser Phe Met Asn Leu Thr
 355 360 365
 Arg Leu Gln Lys Leu Tyr Leu Asn Gly Asn His Leu Thr Lys Leu Ser
 370 375 380
 Lys Gly Met Phe Leu Gly Leu His Asn Leu Glu Tyr Leu Tyr Leu Glu
 385 390 395 400
 Tyr Asn Ala Ile Lys Glu Ile Leu Pro Gly Thr Phe Asn Pro Met Pro
 405 410 415
 Lys Leu Lys Val Leu Tyr Leu Asn Asn Asn Leu Leu Gln Val Leu Pro
 420 425 430
 Pro His Ile Phe Ser Gly Val Pro Leu Thr Lys Val Asn Leu Lys Thr
 435 440 445
 Asn Gln Phe Thr His Leu Pro Val Ser Asn Ile Leu Asp Asp Leu Asp

450		455		460
Leu Leu Thr Gln Ile Asp	Leu Glu Asp Asn Pro Trp Asp Cys Ser Cys			
465		470		480
Asp Leu Val Gly Leu Gln Gln Trp Ile Gln Lys Leu Ser Lys Asn Thr				
		485		495
Val Thr Asp Asp Ile Leu Cys Thr Ser Pro Gly His Leu Asp Lys Lys				
		500		510
Glu Leu Lys Ala Leu Asn Ser Glu Ile Leu Cys Pro Gly Leu Val Asn				
		515		525
Asn Pro Ser Met Pro Thr Gln Thr Ser Tyr Leu Met Val Thr Thr Pro				
		530		540
Ala Thr Thr Thr Asn Thr Ala Asp Thr Ile Leu Arg Ser Leu Thr Asp				
545		550		560
Ala Val Pro Leu Ser Val Leu Ile Leu Gly Leu Leu Ile Met Phe Ile				
		565		575
Thr Ile Val Phe Cys Ala Ala Gly Ile Val Val Leu Val Leu His Arg				
		580		590
Arg Arg Arg Tyr Lys Lys Lys Gln Val Asp Glu Gln Met Arg Asp Asn				
		595		605
Ser Pro Val His Leu Gln Tyr Ser Met Tyr Gly His Lys Thr Thr His				
		610		620
His Thr Thr Glu Arg Pro Ser Ala Ser Leu Tyr Glu Gln His Met Val				
625		630		640
Ser Pro Met Val His Val Tyr Arg Ser Pro Ser Phe Gly Pro Lys His				
		645		655
Leu Glu Glu Glu Glu Glu Arg Asn Glu Lys Glu Gly Ser Asp Ala Lys				
		660		670
His Leu Gln Arg Ser Leu Leu Glu Gln Glu Asn His Ser Pro Leu Thr				
		675		685
Gly Ser Asn Met Lys Tyr Lys Thr Thr Asn Gln Ser Thr Glu Phe Leu				
		690		700
Ser Phe Gln Asp Ala Ser Ser Leu Tyr Arg Asn Ile Leu Glu Lys Glu				
705		710		720
Arg Glu Leu Gln Gln Leu Gly Ile Thr Glu Tyr Leu Arg Lys Asn Ile				
		725		735
Ala Gln Leu Gln Pro Asp Met Glu Ala His Tyr Pro Gly Ala His Glu				
		740		750
Glu Leu Lys Leu Met Glu Thr Leu Met Tyr Ser Arg Pro Arg Lys Val				
		755		765
Leu Val Glu Gln Thr Lys Asn Glu Tyr Phe Glu Leu Lys Ala Asn Leu				
		770		780
His Ala Glu Pro Asp Tyr Leu Glu Val Leu Glu Gln Gln Thr				
785		790		795

<210> 20
 <211> 405
 <212> PRT
 <213> Homo sapiens

<400> 20
 Met Leu Ile Asn Cys Glu Ala Lys Gly Ile Lys Met Val Ser Glu Ile
 1 5 10 15
 Ser Val Pro Pro Ser Arg Pro Phe Gln Leu Ser Leu Leu Asn Asn Gly
 20 25 30
 Leu Thr Met Leu His Thr Asn Asp Phe Ser Gly Leu Thr Asn Ala Ile
 35 40 45
 Ser Ile His Leu Gly Phe Asn Asn Ile Ala Asp Ile Glu Ile Gly Ala
 50 55 60
 Phe Asn Gly Leu Gly Leu Leu Lys Gln Leu His Ile Asn His Asn Ser
 65 70 75 80
 Leu Glu Ile Leu Lys Glu Asp Thr Phe His Gly Leu Glu Asn Leu Glu
 85 90 95
 Phe Leu Gln Ala Asp Asn Asn Phe Ile Thr Val Ile Glu Pro Ser Ala

			100					105					110				
Phe	Ser	Lys	Leu	Asn	Arg	Leu	Lys	Val	Leu	Ile	Leu	Asn	Asp	Asn	Ala		
		115					120					125					
Ile	Glu	Ser	Leu	Pro	Pro	Asn	Ile	Phe	Arg	Phe	Val	Pro	Leu	Thr	His		
		130				135					140						
Leu	Asp	Leu	Arg	Gly	Asn	Gln	Leu	Gln	Thr	Leu	Pro	Tyr	Val	Gly	Phe		
145					150					155					160		
Leu	Glu	His	Ile	Gly	Arg	Ile	Leu	Asp	Leu	Gln	Leu	Glu	Asp	Asn	Lys		
				165					170					175			
Trp	Ala	Cys	Asn	Cys	Asp	Leu	Leu	Gln	Leu	Lys	Thr	Trp	Leu	Glu	Asn		
			180					185					190				
Met	Pro	Pro	Gln	Ser	Ile	Ile	Gly	Asp	Val	Val	Cys	Asn	Ser	Pro	Pro		
		195					200					205					
Phe	Phe	Lys	Gly	Ser	Ile	Leu	Ser	Arg	Leu	Lys	Lys	Glu	Ser	Ile	Cys		
	210				215						220						
Pro	Thr	Pro	Pro	Val	Tyr	Glu	Glu	His	Glu	Asp	Pro	Ser	Gly	Ser	Leu		
225					230					235					240		
His	Leu	Ala	Ala	Thr	Ser	Ser	Ile	Asn	Asp	Ser	Arg	Met	Ser	Thr	Lys		
				245					250					255			
Thr	Thr	Ser	Ile	Leu	Lys	Leu	Pro	Thr	Lys	Ala	Pro	Gly	Leu	Ile	Pro		
			260					265					270				
Tyr	Ile	Thr	Lys	Pro	Ser	Thr	Gln	Leu	Pro	Gly	Pro	Tyr	Cys	Pro	Ile		
	275						280					285					
Pro	Cys	Asn	Cys	Lys	Val	Leu	Ser	Pro	Ser	Gly	Leu	Leu	Ile	His	Cys		
	290					295				300							
Gln	Glu	Arg	Asn	Ile	Glu	Ser	Leu	Ser	Asp	Leu	Arg	Pro	Pro	Pro	Gln		
305					310					315					320		
Asn	Pro	Arg	Lys	Leu	Ile	Leu	Ala	Gly	Asn	Ile	Ile	His	Ser	Leu	Met		
				325					330					335			
Lys	Ser	Asp	Leu	Val	Glu	Tyr	Phe	Thr	Leu	Glu	Met	Leu	His	Leu	Gly		
			340					345					350				
Asn	Asn	Arg	Ile	Glu	Val	Leu	Glu	Glu	Gly	Ser	Phe	Met	Asn	Leu	Thr		
	355						360					365					
Arg	Leu	Gln	Lys	Leu	Tyr	Leu	Asn	Gly	Asn	His	Leu	Thr	Lys	Leu	Ser		
	370					375					380						
Lys	Gly	Met	Phe	Leu	Gly	Leu	His	Ala	Ile	Lys	Glu	Ile	Leu	Pro	Gly		
385					390					395					400		
Thr	Phe	Asn	Pro	Met													
				405													

<210> 21
 <211> 415
 <212> PRT
 <213> Homo sapiens

<400> 21

Met	Leu	Ile	Asn	Cys	Glu	Ala	Lys	Gly	Ile	Lys	Met	Val	Ser	Glu	Ile		
1				5				10						15			
Ser	Val	Pro	Pro	Ser	Arg	Pro	Phe	Gln	Leu	Ser	Leu	Leu	Asn	Asn	Gly		
		20						25					30				
Leu	Thr	Met	Leu	His	Thr	Asn	Asp	Phe	Ser	Gly	Leu	Thr	Asn	Ala	Ile		
	35					40						45					
Ser	Ile	His	Leu	Gly	Phe	Asn	Asn	Ile	Ala	Asp	Ile	Glu	Ile	Gly	Ala		
	50					55					60						
Phe	Asn	Gly	Leu	Gly	Leu	Leu	Lys	Gln	Leu	His	Ile	Asn	His	Asn	Ser		
65					70					75					80		
Leu	Glu	Ile	Leu	Lys	Glu	Asp	Thr	Phe	His	Gly	Leu	Glu	Asn	Leu	Glu		
			85					90						95			
Phe	Leu	Gln	Ala	Asp	Asn	Asn	Phe	Ile	Thr	Val	Ile	Glu	Pro	Ser	Ala		
		100						105					110				
Phe	Ser	Lys	Leu	Asn	Arg	Leu	Lys	Val	Leu	Ile	Leu	Asn	Asp	Asn	Ala		
	115						120					125					
Ile	Glu	Ser	Leu	Pro	Pro	Asn	Ile	Phe	Arg	Phe	Val	Pro	Leu	Thr	His		

130		135		140
Leu Asp Leu Arg Gly Asn Gln Leu Gln Thr Leu Pro Tyr Val Gly Phe				
145		150		155
Leu Glu His Ile Gly Arg Ile Leu Asp Leu Gln Leu Glu Asp Asn Lys				
	165		170	175
Trp Ala Cys Asn Cys Asp Leu Leu Gln Leu Lys Thr Trp Leu Glu Asn				
	180		185	190
Met Pro Pro Gln Ser Ile Ile Gly Asp Val Val Cys Asn Ser Pro Pro				
	195		200	205
Phe Phe Lys Gly Ser Ile Leu Ser Arg Leu Lys Lys Glu Ser Ile Cys				
	210		215	220
Pro Thr Pro Pro Val Tyr Glu Glu His Glu Asp Pro Ser Gly Ser Leu				
225		230		235
His Leu Ala Ala Thr Ser Ser Ile Asn Asp Ser Arg Met Ser Thr Lys				
	245		250	255
Thr Thr Ser Ile Leu Lys Leu Pro Thr Lys Ala Pro Gly Leu Ile Pro				
	260		265	270
Tyr Ile Thr Lys Pro Ser Thr Gln Leu Pro Gly Pro Tyr Cys Pro Ile				
	275		280	285
Pro Cys Asn Cys Lys Val Leu Ser Pro Ser Gly Leu Leu Ile His Cys				
	290		295	300
Gln Glu Arg Asn Ile Glu Ser Leu Ser Asp Leu Arg Pro Pro Pro Gln				
305		310		315
Asn Pro Arg Lys Leu Ile Leu Ala Gly Asn Ile Ile His Ser Leu Met				
	325		330	335
Lys Ser Asp Leu Val Glu Tyr Phe Thr Leu Glu Met Leu His Leu Gly				
	340		345	350
Asn Asn Arg Ile Glu Val Leu Glu Glu Gly Ser Phe Met Asn Leu Thr				
	355		360	365
Arg Leu Gln Lys Leu Tyr Leu Asn Gly Asn His Leu Thr Lys Leu Ser				
	370		375	380
Lys Gly Met Phe Leu Gly Leu His Asn Leu Glu Tyr Leu Tyr Leu Glu				
385		390		395
Tyr Asn Ala Ile Lys Glu Ile Leu Pro Gly Thr Phe Asn Pro Met				
	405		410	415

<210> 22
 <211> 777
 <212> PRT
 <213> Homo sapiens

<400> 22
 Met Lys Leu Trp Ile His Leu Phe Tyr Ser Ser Leu Leu Ala Cys Ile
 1 5 10 15
 Ser Leu His Ser Gln Thr Pro Val Leu Ser Ser Arg Gly Ser Cys Asp
 20 25 30
 Ser Leu Cys Asn Cys Glu Glu Lys Asp Gly Thr Met Leu Ile Asn Cys
 35 40 45
 Glu Ala Lys Gly Ile Lys Met Val Ser Glu Ile Ser Val Pro Pro Ser
 50 55 60
 Arg Pro Phe Gln Leu Ser Leu Leu Asn Asn Gly Leu Thr Met Leu His
 65 70 75 80
 Thr Asn Asp Phe Ser Gly Leu Thr Asn Ala Ile Ser Ile His Leu Gly
 85 90 95
 Phe Asn Asn Ile Ala Asp Ile Glu Ile Gly Ala Phe Asn Gly Leu Gly
 100 105 110
 Leu Leu Lys Gln Leu His Ile Asn His Asn Ser Leu Glu Ile Leu Lys
 115 120 125
 Glu Asp Thr Phe His Gly Leu Glu Asn Leu Glu Phe Leu Gln Ala Asp
 130 135 140
 Asn Asn Phe Ile Thr Val Ile Glu Pro Ser Ala Phe Ser Lys Leu Asn
 145 150 155 160
 Arg Leu Lys Val Leu Ile Leu Asn Asp Asn Ala Ile Glu Ser Leu Pro

				165					170					175			
Pro	Asn	Ile	Phe	Arg	Phe	Val	Pro	Leu	Thr	His	Leu	Asp	Leu	Arg	Gly		
			180					185					190				
Asn	Gln	Leu	Gln	Thr	Leu	Pro	Tyr	Val	Gly	Phe	Leu	Glu	His	Ile	Gly		
		195					200					205					
Arg	Ile	Leu	Asp	Leu	Gln	Leu	Glu	Asp	Asn	Lys	Trp	Ala	Cys	Asn	Cys		
	210				215						220						
Asp	Leu	Leu	Gln	Leu	Lys	Thr	Trp	Leu	Glu	Asn	Met	Pro	Pro	Gln	Ser		
225					230					235					240		
Ile	Ile	Gly	Asp	Val	Val	Cys	Asn	Ser	Pro	Pro	Phe	Phe	Lys	Gly	Ser		
				245					250					255			
Ile	Leu	Ser	Arg	Leu	Lys	Lys	Glu	Ser	Ile	Cys	Pro	Thr	Pro	Pro	Val		
			260					265					270				
Tyr	Glu	Glu	His	Glu	Asp	Pro	Ser	Gly	Ser	Leu	His	Leu	Ala	Ala	Thr		
	275						280						285				
Ser	Ser	Ile	Asn	Asp	Ser	Arg	Met	Ser	Thr	Lys	Thr	Thr	Ser	Ile	Leu		
	290					295					300						
Lys	Leu	Pro	Thr	Lys	Ala	Pro	Gly	Leu	Ile	Pro	Tyr	Ile	Thr	Lys	Pro		
305					310					315					320		
Ser	Thr	Gln	Leu	Pro	Gly	Pro	Tyr	Cys	Pro	Ile	Pro	Cys	Asn	Cys	Lys		
				325					330					335			
Val	Leu	Ser	Pro	Ser	Gly	Leu	Leu	Ile	His	Cys	Gln	Glu	Arg	Asn	Ile		
			340					345					350				
Glu	Ser	Leu	Ser	Asp	Leu	Arg	Pro	Pro	Pro	Gln	Asn	Pro	Arg	Lys	Leu		
	355						360					365					
Ile	Leu	Ala	Gly	Asn	Ile	Ile	His	Ser	Leu	Met	Lys	Ser	Asp	Leu	Val		
	370				375						380						
Glu	Tyr	Phe	Thr	Leu	Glu	Met	Leu	His	Leu	Gly	Asn	Asn	Arg	Ile	Glu		
385					390					395					400		
Val	Leu	Glu	Glu	Gly	Ser	Phe	Met	Asn	Leu	Thr	Arg	Leu	Gln	Lys	Leu		
				405					410					415			
Tyr	Leu	Asn	Gly	Asn	His	Leu	Thr	Lys	Leu	Ser	Lys	Gly	Met	Phe	Leu		
		420						425					430				
Gly	Leu	His	Ala	Ile	Lys	Glu	Ile	Leu	Pro	Gly	Thr	Phe	Asn	Pro	Met		
	435						440					445					
His	Ile	Phe	Ser	Gly	Val	Pro	Leu	Thr	Lys	Val	Asn	Leu	Lys	Thr	Asn		
	450					455					460						
Gln	Phe	Thr	His	Leu	Pro	Val	Ser	Asn	Ile	Asn	Pro	Trp	Asp	Cys	Ser		
465					470					475					480		
Cys	Asp	Leu	Val	Gly	Leu	Gln	Gln	Trp	Ile	Gln	Lys	Leu	Ser	Lys	Asn		
				485					490					495			
Thr	Val	Thr	Asp	Asp	Ile	Leu	Cys	Thr	Ser	Pro	Gly	His	Leu	Asp	Lys		
			500					505					510				
Lys	Glu	Leu	Lys	Ala	Leu	Asn	Ser	Glu	Ile	Leu	Cys	Pro	Gly	Leu	Val		
	515						520					525					
Asn	Asn	Pro	Ser	Met	Pro	Thr	Gln	Thr	Ser	Tyr	Leu	Met	Val	Ile	Leu		
	530					535				540							
Arg	Ser	Leu	Thr	Asp	Ala	Val	Pro	Leu	Ser	Val	Leu	Ile	Leu	Gly	Leu		
545					550					555					560		
Leu	Ile	Met	Phe	Ile	Thr	Ile	Val	Phe	Cys	Ala	Ala	Gly	Ile	Val	Val		
				565					570					575			
Leu	Val	Leu	His	Arg	Arg	Arg	Arg	Tyr	Lys	Lys	Lys	Gln	Val	Asp	Glu		
			580					585					590				
Gln	Met	Arg	Asp	Asn	Ser	Pro	Val	His	Leu	Gln	Tyr	Ser	Met	Tyr	Gly		
	595						600					605					
His	Lys	Thr	Thr	His	His	Thr	Thr	Glu	Arg	Pro	Ser	Ala	Ser	Leu	Tyr		
	610					615					620						
Glu	Gln	His	Met	Val	Ser	Pro	Met	Val	His	Val	Tyr	Arg	Ser	Pro	Ser		
625					630					635					640		
Phe	Gly	Pro	Lys	His	Leu	Gly	Ser	Asp	Ala	Lys	His	Leu	Gln	Arg	Ser		
				645					650					655			
Leu	Leu	Glu	Gln	Asn	His	Ser	Pro	Leu	Thr	Gly	Ser	Asn	Met	Lys			
			660				665					670					
Tyr	Lys	Thr	Thr	Asn	Gln	Ser	Thr	Glu	Phe	Leu	Ser	Phe	Gln	Asp	Ala		

		675					680					685					
Ser	Ser	Leu	Tyr	Arg	Asn	Ile	Leu	Glu	Lys	Glu	Arg	Glu	Leu	Gln	Gln		
	690					695					700						
Leu	Gly	Ile	Thr	Glu	Tyr	Leu	Arg	Lys	Asn	Ile	Ala	Gln	Leu	Gln	Pro		
705					710					715					720		
Asp	Met	Glu	Ala	His	Tyr	Pro	Gly	Ala	His	Glu	Glu	Leu	Lys	Leu	Met		
				725					730					735			
Glu	Thr	Leu	Met	Tyr	Ser	Arg	Pro	Arg	Lys	Val	Leu	Val	Glu	Gln	Thr		
			740					745					750				
Lys	Asn	Glu	Tyr	Phe	Glu	Leu	Lys	Ala	Asn	Leu	His	Ala	Glu	Pro	Asp		
		755					760					765					
Tyr	Leu	Glu	Val	Leu	Glu	Gln	Gln	Thr									
	770					775											

<210> 23
 <211> 832
 <212> PRT
 <213> Homo sapiens

<400> 23

Met	Phe	Leu	Trp	Leu	Phe	Leu	Ile	Leu	Ser	Ala	Leu	Ile	Ser	Ser	Thr		
1				5					10					15			
Asn	Ala	Asp	Ser	Asp	Ile	Ser	Val	Glu	Ile	Cys	Asn	Val	Cys	Ser	Cys		
		20						25					30				
Val	Ser	Val	Glu	Asn	Val	Leu	Tyr	Val	Asn	Cys	Glu	Lys	Val	Ser	Val		
		35					40					45					
Tyr	Arg	Pro	Asn	Gln	Leu	Lys	Pro	Pro	Trp	Ser	Asn	Phe	Tyr	His	Leu		
	50					55					60						
Asn	Phe	Gln	Asn	Asn	Phe	Leu	Asn	Ile	Leu	Tyr	Pro	Asn	Thr	Phe	Leu		
65				70					75						80		
Asn	Phe	Ser	His	Ala	Val	Ser	Leu	His	Leu	Gly	Asn	Asn	Lys	Leu	Gln		
			85						90					95			
Asn	Ile	Glu	Gly	Gly	Ala	Phe	Leu	Gly	Leu	Ser	Ala	Leu	Lys	Gln	Leu		
		100						105					110				
His	Leu	Asn	Asn	Glu	Leu	Lys	Ile	Leu	Arg	Ala	Asp	Tyr	Asn	Leu	Ile	Lys	
	115					120					125						
Gly	Ile	Glu	Asn	Leu	Glu	Tyr	Leu	Gln	Ala	Asp	Tyr	Asn	Leu	Ile	Lys		
	130					135					140						
Tyr	Ile	Glu	Arg	Gly	Ala	Phe	Asn	Lys	Leu	His	Lys	Leu	Lys	Val	Leu		
145				150					155						160		
Ile	Leu	Asn	Asp	Asn	Leu	Ile	Ser	Phe	Leu	Pro	Asp	Asn	Ile	Phe	Arg		
			165					170						175			
Phe	Ala	Ser	Leu	Thr	His	Leu	Asp	Ile	Arg	Gly	Asn	Arg	Ile	Gln	Lys		
		180						185					190				
Leu	Pro	Tyr	Ile	Gly	Val	Leu	Glu	His	Ile	Gly	Arg	Val	Val	Glu	Leu		
	195						200					205					
Gln	Leu	Glu	Asp	Asn	Pro	Trp	Asn	Cys	Ser	Cys	Asp	Leu	Leu	Pro	Leu		
	210					215					220						
Lys	Ala	Trp	Leu	Glu	Asn	Met	Pro	Tyr	Asn	Ile	Tyr	Ile	Gly	Glu	Ala		
225					230				235					240			
Ile	Cys	Glu	Thr	Pro	Ser	Asp	Leu	Tyr	Gly	Arg	Leu	Leu	Lys	Glu	Thr		
			245						250					255			
Asn	Lys	Gln	Glu	Leu	Cys	Pro	Met	Gly	Thr	Gly	Ser	Asp	Phe	Asp	Val		
		260						265					270				
Arg	Ile	Leu	Pro	Pro	Ser	Gln	Leu	Glu	Asn	Gly	Tyr	Thr	Thr	Pro	Asn		
		275				280						285					
Gly	His	Thr	Thr	Gln	Thr	Ser	Leu	His	Arg	Leu	Val	Thr	Lys	Pro	Pro		
	290					295					300						
Lys	Thr	Thr	Asn	Pro	Ser	Lys	Ile	Ser	Gly	Ile	Val	Ala	Gly	Lys	Ala		
305				310					315					320			
Leu	Ser	Asn	Arg	Asn	Leu	Ser	Gln	Ile	Val	Ser	Tyr	Gln	Thr	Arg	Val		
			325						330					335			
Pro	Pro	Leu	Thr	Pro	Cys	Pro	Ala	Pro	Cys	Phe	Cys	Lys	Thr	His	Pro		

			340					345					350				
Ser	Asp	Leu	Gly	Leu	Ser	Val	Asn	Cys	Gln	Glu	Lys	Asn	Ile	Gln	Ser		
		355					360					365					
Met	Ser	Glu	Leu	Ile	Pro	Lys	Pro	Leu	Asn	Ala	Lys	Lys	Leu	His	Val		
		370				375					380						
Asn	Gly	Asn	Ser	Ile	Lys	Asp	Val	Asp	Val	Ser	Asp	Phe	Thr	Asp	Phe		
385					390					395					400		
Glu	Gly	Leu	Asp	Leu	Leu	His	Leu	Gly	Ser	Asn	Gln	Ile	Thr	Val	Ile		
				405					410					415			
Lys	Gly	Asp	Val	Phe	His	Asn	Leu	Thr	Asn	Leu	Arg	Arg	Leu	Tyr	Leu		
			420					425					430				
Asn	Gly	Asn	Gln	Ile	Glu	Arg	Leu	Tyr	Pro	Glu	Ile	Phe	Ser	Gly	Leu		
		435					440					445					
His	Asn	Leu	Gln	Tyr	Leu	Tyr	Leu	Glu	Tyr	Asn	Leu	Ile	Lys	Glu	Ile		
	450				455					460							
Ser	Ala	Gly	Thr	Phe	Asp	Ser	Met	Pro	Asn	Leu	Gln	Leu	Leu	Tyr	Leu		
465					470					475					480		
Asn	Asn	Asn	Leu	Leu	Lys	Ser	Leu	Pro	Val	Tyr	Ile	Phe	Ser	Gly	Ala		
				485					490					495			
Pro	Leu	Ala	Arg	Leu	Asn	Leu	Arg	Asn	Asn	Lys	Phe	Met	Tyr	Leu	Pro		
		500					505					510					
Val	Ser	Gly	Val	Leu	Asp	Gln	Leu	Gln	Ser	Leu	Thr	Gln	Ile	Asp	Leu		
		515				520						525					
Glu	Gly	Asn	Pro	Trp	Asp	Cys	Thr	Cys	Asp	Leu	Val	Ala	Leu	Lys	Leu		
	530				535					540							
Trp	Val	Glu	Lys	Leu	Ser	Asp	Gly	Ile	Val	Val	Lys	Glu	Leu	Lys	Cys		
545					550				555						560		
Glu	Thr	Pro	Val	Gln	Phe	Ala	Asn	Ile	Glu	Leu	Lys	Ser	Leu	Lys	Asn		
				565					570					575			
Glu	Ile	Leu	Cys	Pro	Lys	Leu	Leu	Asn	Lys	Pro	Ser	Ala	Pro	Phe	Thr		
			580					585				590					
Ser	Pro	Ala	Pro	Ala	Ile	Thr	Phe	Thr	Thr	Pro	Leu	Gly	Pro	Ile	Arg		
	595					600						605					
Ser	Pro	Pro	Gly	Gly	Pro	Val	Pro	Leu	Ser	Ile	Leu	Ile	Leu	Ser	Ile		
	610				615						620						
Leu	Val	Val	Leu	Ile	Leu	Thr	Val	Phe	Val	Ala	Phe	Cys	Leu	Leu	Val		
625					630				635						640		
Phe	Val	Leu	Arg	Arg	Asn	Lys	Lys	Pro	Thr	Val	Lys	His	Glu	Gly	Leu		
				645					650					655			
Gly	Asn	Pro	Asp	Cys	Gly	Ser	Met	Gln	Leu	Gln	Leu	Arg	Lys	His	Asp		
		660						665				670					
His	Lys	Thr	Asn	Lys	Lys	Asp	Gly	Leu	Ser	Thr	Glu	Ala	Phe	Ile	Pro		
	675					680					685						
Gln	Thr	Ile	Glu	Gln	Met	Ser	Lys	Ser	His	Thr	Cys	Gly	Leu	Lys	Glu		
	690				695					700							
Ser	Glu	Thr	Gly	Phe	Met	Phe	Ser	Asp	Pro	Pro	Gly	Gln	Lys	Val	Val		
705					710				715						720		
Met	Arg	Asn	Val	Ala	Asp	Lys	Glu	Lys	Asp	Leu	Leu	His	Val	Asp	Thr		
				725					730					735			
Arg	Lys	Arg	Leu	Ser	Thr	Ile	Asp	Glu	Leu	Asp	Glu	Leu	Phe	Pro	Ser		
			740					745				750					
Arg	Asp	Ser	Asn	Val	Phe	Ile	Gln	Asn	Phe	Leu	Glu	Ser	Lys	Lys	Glu		
	755						760					765					
Tyr	Asn	Ser	Ile	Gly	Val	Ser	Gly	Phe	Glu	Ile	Arg	Tyr	Pro	Glu	Lys		
	770					775					780						
Gln	Pro	Asp	Lys	Lys	Ser	Lys	Lys	Ser	Leu	Ile	Gly	Gly	Asn	His	Ser		
785					790				795						800		
Lys	Ile	Val	Val	Glu	Gln	Arg	Lys	Ser	Glu	Tyr	Phe	Glu	Leu	Lys	Ala		
				805					810					815			
Lys	Leu	Gln	Ser	Ser	Pro	Asp	Tyr	Leu	Gln	Val	Leu	Glu	Glu	Gln	Thr		
			820					825						830			

<211> 14
<212> PRT
<213> Tetanus toxoid

<400> 24
Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu
1 5 10

<210> 25
<211> 21
<212> PRT
<213> Plasmodium falciparum

<400> 25
Asp Ile Glu Lys Lys Ile Ala Lys Met Glu Lys Ala Ser Ser Val Phe
1 5 10 15
Asn Val Val Asn Ser
20

<210> 26
<211> 16
<212> PRT
<213> Streptococcus

<400> 26
Gly Ala Val Asp Ser Ile Leu Gly Gly Val Ala Thr Tyr Gly Ala Ala
1 5 10 15

<210> 27
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> pan-DR binding epitope

<221> VARIANT
<222> 3
<223> Xaa = cyclohexylalanine, phenylalanine, or
tyrosine

<221> VARIANT
<222> 1, 13
<223> Xaa = D-alanine or L-alanine

<400> 27
Xaa Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala Ala Xaa
1 5 10

<210> 28
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 28
ttttgatcaa gctt

14

<210> 29
 <211> 42
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Primer

 <400> 29
 ctaatacgac tcactatagg gctcgagcgg ccgcccgggc ag 42

 <210> 30
 <211> 12
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Primer

 <400> 30
 gatcctgccc gg 12

 <210> 31
 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
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 Glu Ala Lys Gly Ile Lys Met Val Ser Glu Ile Ser Val Pro Pro Ser
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 Arg Pro Phe Gln Leu Ser Leu Leu Asn Asn Gly Leu Thr Met Leu His
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 Thr Asn Asp Phe Ser Gly Leu Thr Asn Ala Ile Ser Ile His Leu Gly
 85 90 95
 Phe Asn Asn Ile Ala Asp Ile Glu Ile Gly Ala Phe Asn Gly Leu Gly
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Gln	Gln	Trp	Ile	Gln	Lys	Leu	Ser	Lys	Asn	Thr	Val	Thr	Asp	Asp	Ile
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Leu	Cys	Thr	Ser	Pro	Gly	His	Leu	Asp	Lys	Lys	Glu	Leu	Lys	Ala	Leu
545					550					555					560
Asn	Ser	Glu	Ile	Leu	Cys	Pro	Gly	Leu	Val	Asn	Asn	Pro	Ser	Met	Pro
			565						570					575	
Thr	Gln	Thr	Ser	Tyr	Leu	Met	Val	Thr	Thr	Pro	Ala	Thr	Thr	Thr	Asn
			580					585					590		
Thr	Ala	Asp	Thr	Ile	Leu	Arg	Ser	Leu	Thr	Asp	Ala	Val	Pro	Leu	Ser
	595						600					605			
Val	Leu	Ile	Leu	Gly	Leu	Leu	Ile	Met	Phe	Ile	Thr	Ile	Val	Phe	Cys
	610					615					620				

Ala	Ala	Gly	Ile	Val	Val	Leu	Val	Leu	His	Arg	Arg	Arg	Arg	Tyr	Lys
625					630					635					640
Lys	Lys	Gln	Val	Asp	Glu	Gln	Met	Arg	Asp	Asn	Ser	Pro	Val	His	Leu
				645					650					655	
Gln	Tyr	Ser	Met	Tyr	Gly	His	Lys	Thr	Thr	His	His	Thr	Thr	Glu	Arg
			660					665					670		
Pro	Ser	Ala	Ser	Leu	Tyr	Glu	Gln	His	Met	Gly	Ala	His	Glu	Glu	Leu
		675					680					685			
Lys	Leu	Met	Glu	Thr	Leu	Met	Tyr	Ser	Arg	Pro	Arg	Lys	Val	Leu	Val
	690					695					700				
Glu	Gln	Thr	Lys	Asn	Glu	Tyr	Phe	Glu	Leu	Lys	Ala	Asn	Leu	His	Ala
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<210> 74
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 <212> PRT
 <213> Homo sapiens

<400> 74

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			20					25					30		
Ser	Leu	Cys	Asn	Cys	Glu	Glu	Lys	Asp	Gly	Thr	Met	Leu	Ile	Asn	Cys
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Glu	Ala	Lys	Gly	Ile	Lys	Met	Val	Ser	Glu	Ile	Ser	Val	Pro	Pro	Ser
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Arg	Pro	Phe	Gln	Leu	Ser	Leu	Leu	Asn	Asn	Gly	Leu	Thr	Met	Leu	His
65				70						75					80
Thr	Asn	Asp	Phe	Ser	Gly	Leu	Thr	Asn	Ala	Ile	Ser	Ile	His	Leu	Gly
			85					90					95		
Phe	Asn	Asn	Ile	Ala	Asp	Ile	Glu	Ile	Gly	Ala	Phe	Asn	Gly	Leu	Gly
			100					105					110		
Leu	Leu	Lys	Gln	Leu	His	Ile	Asn	His	Asn	Ser	Leu	Glu	Ile	Leu	Lys
		115					120					125			
Glu	Asp	Thr	Phe	His	Gly	Leu	Glu	Asn	Leu	Glu	Phe	Leu	Gln	Ala	Asp
	130					135					140				
Asn	Asn	Phe	Ile	Thr	Val	Ile	Glu	Pro	Ser	Ala	Phe	Ser	Lys	Leu	Asn
145					150					155					160
Arg	Leu	Lys	Val	Leu	Ile	Leu	Asn	Asp	Asn	Ala	Ile	Glu	Ser	Leu	Pro
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225					230					235					240
Ile	Ile	Gly	Asp	Val	Val	Cys	Asn	Ser	Pro	Pro	Phe	Phe	Lys	Gly	Ser
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Ser	Thr	Gln	Leu	Pro	Gly	Pro	Tyr	Cys	Pro	Ile	Pro	Cys	Asn	Cys	Lys
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Val	Leu	Ser	Pro	Ser	Gly	Leu	Leu	Ile	His	Cys	Gln	Glu	Arg	Asn	Ile	
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Val	Leu	Glu	Glu	Gly	Ser	Phe	Met	Asn	Leu	Thr	Arg	Leu	Gln	Lys	Leu	
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Tyr	Leu	Asn	Gly	Asn	His	Leu	Thr	Lys	Leu	Ser	Lys	Gly	Met	Phe	Leu	
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Gly	Leu	His	Asn	Leu	Glu	Tyr	Leu	Tyr	Leu	Glu	Tyr	Asn	Ala	Ile	Lys	
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Glu	Ile	Leu	Pro	Gly	Thr	Phe	Asn	Pro	Met	Pro	Lys	Leu	Lys	Val	Leu	
	450					455					460					
Tyr	Leu	Asn	Asn	Asn	Leu	Leu	Gln	Val	Leu	Pro	Pro	His	Ile	Phe	Ser	
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Gln	Gln	Trp	Ile	Gln	Lys	Leu	Ser	Lys	Asn	Thr	Val	Thr	Asp	Asp	Ile	
	530					535					540					
Leu	Cys	Thr	Ser	Pro	Gly	His	Leu	Asp	Lys	Lys	Glu	Leu	Lys	Ala	Leu	
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Asn	Ser	Glu	Ile	Leu	Cys	Pro	Gly	Leu	Val	Asn	Asn	Pro	Ser	Met	Pro	
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Thr	Gln	Thr	Ser	Tyr	Leu	Met	Val	Thr	Thr	Pro	Ala	Thr	Thr	Thr	Asn	
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Thr	Ala	Asp	Thr	Ile	Leu	Arg	Ser	Leu	Thr	Asp	Ala	Val	Pro	Leu	Ser	
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Val	Leu	Ile	Leu	Gly	Leu	Leu	Ile	Met	Phe	Ile	Thr	Ile	Val	Phe	Cys	
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Ala	Ala	Gly	Ile	Val	Val	Leu	Val	Leu	His	Arg	Arg	Arg	Arg	Tyr	Lys	
625					630					635					640	
Lys	Lys	Gln	Val	Asp	Glu	Gln	Met	Arg	Asp	Asn	Ser	Pro	Val	His	Leu	
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Gln	Tyr	Ser	Met	Tyr	Gly	His	Lys	Thr	Thr	His	His	Thr	Thr	Glu	Arg	
			660					665					670			
Pro	Ser	Ala	Ser	Leu	Tyr	Glu	Gln	His	Met	Val	Ser	Pro	Met	Val	His	
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Val	Tyr	Arg	Ser	Pro	Ser	Phe	Gly	Pro	Lys	His	Leu	Glu	Glu	Glu	Glu	
	690					695					700					
Glu	Arg	Asn	Glu	Lys	Glu	Gly	Ser	Asp	Ala	Lys	His	Leu	Gln	Arg	Ser	
705					710				715						720	
Leu	Leu	Glu	Gln	Glu	Asn	His	Ser	Pro	Leu	Thr	Gly	Ser	Asn	Met	Lys	
				725					730					735		
Tyr	Lys	Thr	Thr	Asn	Gln	Ser	Thr	Glu	Phe	Leu	Ser	Phe	Gln	Asp	Ala	
			740					745					750			
Ser	Ser	Leu	Tyr	Arg	Asn	Ile	Leu	Glu	Lys	Glu	Arg	Glu	Leu	Gln	Gln	
		755					760					765				
Leu	Gly	Ile	Thr	Glu	Tyr	Leu	Arg	Lys	Asn	Ile	Ala	Gln	Leu	Gln	Pro	
	770					775					780					
Asp	Met	Glu	Ala	His	Tyr	Pro	Gly	Ala	His	Glu	Glu	Leu	Lys	Leu	Met	
785					790					795					800	
Glu	Thr	Leu	Met	Tyr	Ser	Arg	Pro	Arg	Lys	Val	Leu	Val	Glu	Gln	Thr	
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Lys	Asn	Glu	Tyr	Phe	Glu	Leu	Lys	Ala	Asn	Leu	His	Ala	Glu	Pro	Asp	
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Tyr	Leu	Glu	Val	Leu	Glu	Gln	Gln	Thr								
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<400> 75

56

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 465 470 475 480
 Gly Val Pro Leu Thr Lys Val Asn Leu Lys Thr Asn Gln Phe Thr His
 485 490 495
 Leu Pro Val Ser Asn Ile Leu Asp Asp Leu Asp Leu Leu Thr Gln Ile
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 Asp Leu Glu Asp Asn Pro Trp Asp Cys Ser Cys Asp Leu Val Gly Leu
 515 520 525
 Gln Gln Trp Ile Gln Lys Leu Ser Lys Asn Thr Val Thr Asp Asp Ile
 530 535 540
 Leu Cys Thr Ser Pro Gly His Leu Asp Lys Lys Glu Leu Lys Ala Leu
 545 550 555 560
 Asn Ser Glu Ile Leu Cys Pro Gly Leu Val Asn Asn Pro Ser Met Pro
 565 570 575
 Thr Gln Thr Ser Tyr Leu Met Val Thr Thr Pro Ala Thr Thr Asn
 580 585 590
 Thr Ala Asp Thr Ile Leu Arg Ser Leu Thr Asp Ala Val Pro Leu Ser
 595 600 605
 Val Leu Ile Leu Gly Leu Leu Ile Met Phe Ile Thr Ile Val Phe Cys
 610 615 620
 Ala Ala Gly Ile Val Val Leu Val Leu His Arg Arg Arg Arg Tyr Lys
 625 630 635 640
 Lys Lys Gln Val Asp Glu Gln Met Arg Asp Asn Ser Pro Val His Leu
 645 650 655
 Gln Tyr Ser Met Tyr Gly His Lys Thr Thr His His Thr Thr Glu Arg
 660 665 670
 Pro Ser Ala Ser Leu Tyr Glu Gln His Met Gly Ala His Glu Glu Leu
 675 680 685
 Lys Leu Met Glu Thr Leu Met Tyr Ser Arg Pro Arg Lys Val Leu Val
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 <211> 1620
 <212> DNA
 <213> Homo sapiens

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 tctttgcaat tgtgaggaaa aagatggcac aatgctaata aattgtgaag caaaagggtat 180
 caagatggta tctgaaataa gtgtgccacc atcacgacct ttccaactaa gcttattaaa 240
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 acaccttgga tttacaataa ttgcagatat tgagataggt gcattttaatg gccttggcct 360
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 gagtcttcct ccaaactatc tccgatttgt tcctttaacc catctagatc ttcgtggaaa 600
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<210> 77
 <211> 2555
 <212> DNA
 <213> Homo sapiens

<400> 77						
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<210> 78
 <211> 1620
 <212> DNA
 <213> Homo sapiens

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<400> 78
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<210> 79
<211> 395
<212> PRT
<213> Homo sapiens

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Ser Leu Cys Asn Cys Glu Glu Lys Asp Gly Thr Met Leu Ile Asn Cys
 35           40           45
Glu Ala Lys Gly Ile Lys Met Val Ser Glu Ile Ser Val Pro Pro Ser
 50           55           60
Arg Pro Phe Gln Leu Ser Leu Leu Asn Asn Gly Leu Thr Met Leu His
 65           70           75           80
Thr Asn Asp Phe Ser Gly Leu Thr Asn Ala Ile Ser Ile His Leu Gly
 85           90           95
Phe Asn Asn Ile Ala Asp Ile Glu Ile Gly Ala Phe Asn Gly Leu Gly
100           105           110
Leu Leu Lys Gln Leu His Ile Asn His Asn Ser Leu Glu Ile Leu Lys
115           120           125
Glu Asp Thr Phe His Gly Leu Glu Asn Leu Glu Phe Leu Gln Ala Asp
130           135           140
Asn Asn Phe Ile Thr Val Ile Glu Pro Ser Ala Phe Ser Lys Leu Asn
145           150           155           160
Arg Leu Lys Val Leu Ile Leu Asn Asp Asn Ala Ile Glu Ser Leu Pro
165           170           175
Pro Asn Ile Phe Arg Phe Val Pro Leu Thr His Leu Asp Leu Arg Gly
180           185           190
Asn Gln Leu Gln Thr Leu Pro Tyr Val Gly Phe Leu Glu His Ile Gly
195           200           205
Arg Ile Leu Asp Leu Gln Leu Glu Asp Asn Lys Trp Ala Cys Asn Cys
210           215           220

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			260					265					270		
Tyr	Glu	Glu	His	Glu	Asp	Pro	Ser	Gly	Ser	Leu	His	Leu	Ala	Ala	Thr
		275					280					285			
Ser	Ser	Ile	Asn	Asp	Ser	Arg	Met	Ser	Thr	Lys	Thr	Thr	Ser	Ile	Leu
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Ser	Thr	Gln	Leu	Pro	Gly	Pro	Tyr	Cys	Pro	Ile	Pro	Cys	Asn	Cys	Lys
				325					330					335	
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			340					345					350		
Glu	Ser	Leu	Ser	Asp	Leu	Arg	Pro	Pro	Gln	Asn	Pro	Arg	Lys	Leu	
		355					360				365				
Ile	Leu	Ala	Gly	Asn	Ile	Ile	His	Ser	Leu	Met	Lys	Ser	Ile	Leu	Trp
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 <212> PRT
 <213> Homo sapiens

<400> 80

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			20					25					30		
Ser	Leu	Cys	Asn	Cys	Glu	Glu	Lys	Asp	Gly	Thr	Met	Leu	Ile	Asn	Cys
		35					40					45			
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Thr	Asn	Asp	Phe	Ser	Gly	Leu	Thr	Asn	Ala	Ile	Ser	Ile	His	Leu	Gly
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Phe	Asn	Asn	Ile	Ala	Asp	Ile	Glu	Ile	Gly	Ala	Phe	Asn	Gly	Leu	Gly
			100					105					110		
Leu	Leu	Lys	Gln	Leu	His	Ile	Asn	His	Asn	Ser	Leu	Glu	Ile	Leu	Lys
		115					120					125			
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	130					135					140				
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Arg	Leu	Lys	Val	Leu	Ile	Leu	Asn	Asp	Asn	Ala	Ile	Glu	Ser	Leu	Pro
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		180						185					190		
Asn	Gln	Leu	Gln	Thr	Leu	Pro	Tyr	Val	Gly	Phe	Leu	Glu	His	Ile	Gly
		195					200					205			
Arg	Ile	Leu	Asp	Leu	Gln	Leu	Glu	Asp	Asn	Lys	Trp	Ala	Cys	Asn	Cys
	210					215					220				
Asp	Leu	Leu	Gln	Leu	Lys	Thr	Trp	Leu	Glu	Asn	Met	Pro	Pro	Gln	Ser
225					230					235					240
Ile	Ile	Gly	Asp	Val	Val	Cys	Asn	Ser	Pro	Pro	Phe	Phe	Lys	Gly	Ser
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			260					265					270		

Tyr	Glu	Glu	His	Glu	Asp	Pro	Ser	Gly	Ser	Leu	His	Leu	Ala	Ala	Thr	
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Ser	Ser	Ile	Asn	Asp	Ser	Arg	Met	Ser	Thr	Lys	Thr	Thr	Ser	Ile	Leu	
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Lys	Leu	Pro	Thr	Lys	Ala	Pro	Gly	Leu	Ile	Pro	Tyr	Ile	Thr	Lys	Pro	
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Ser	Thr	Gln	Leu	Pro	Gly	Pro	Tyr	Cys	Pro	Ile	Pro	Cys	Asn	Cys	Lys	
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Val	Leu	Ser	Pro	Ser	Gly	Leu	Leu	Ile	His	Cys	Gln	Glu	Arg	Asn	Ile	
			340					345					350			
Glu	Ser	Leu	Ser	Asp	Leu	Arg	Pro	Pro	Pro	Gln	Asn	Pro	Arg	Lys	Leu	
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Ile	Leu	Ala	Gly	Asn	Ile	Ile	His	Ser	Leu	Met	Lys	Ser	Asp	Leu	Val	
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Glu	Tyr	Phe	Thr	Leu	Glu	Met	Leu	His	Leu	Gly	Asn	Asn	Arg	Ile	Glu	
385					390					395					400	
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				405					410					415		
Tyr	Leu	Asn	Gly	Asn	His	Leu	Thr	Lys	Leu	Ser	Lys	Gly	Met	Phe	Leu	
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Glu	Ile	Leu	Pro	Gly	Thr	Phe	Asn	Pro	Met	Pro	Lys	Leu	Lys	Val	Leu	
		450				455					460					
Tyr	Leu	Asn	Asn	Asn	Leu	Leu	Gln	Val	Leu	Pro	Pro	His	Ile	Phe	Ser	
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Gly	Val	Pro	Leu	Thr	Lys	Val	Asn	Leu	Lys	Thr	Asn	Gln	Phe	Thr	His	
				485					490					495		
Leu	Pro	Val	Ser	Asn	Ile	Leu	Asp	Asp	Leu	Asp	Leu	Leu	Thr	Gln	Ile	
			500				505						510			
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Gln	Gln	Trp	Ile	Gln	Lys	Leu	Ser	Lys	Asn	Thr	Val	Thr	Asp	Asp	Ile	
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545					550					555					560	
Asn	Ser	Glu	Ile	Leu	Cys	Pro	Gly	Leu	Val	Asn	Asn	Pro	Ser	Met	Pro	
				565					570					575		
Thr	Gln	Thr	Ser	Tyr	Leu	Met	Val	Thr	Thr	Pro	Ala	Thr	Thr	Thr	Asn	
			580					585					590			
Thr	Ala	Asp	Thr	Ile	Leu	Arg	Ser	Leu	Thr	Asp	Ala	Val	Pro	Leu	Ser	
		595					600					605				
Val	Leu	Ile	Leu	Gly	Leu	Leu	Ile	Met	Phe	Ile	Thr	Ile	Val	Phe	Cys	
		610				615					620					
Ala	Ala	Gly	Ile	Val	Val	Leu	Val	Leu	His	Arg	Arg	Arg	Arg	Tyr	Lys	
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Lys	Lys	Gln	Val	Asp	Glu	Gln	Met	Arg	Asp	Asn	Ser	Pro	Val	His	Leu	
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Gln	Tyr	Ser	Met	Tyr	Gly	His	Lys	Thr	Thr	His	His	Thr	Thr	Glu	Arg	
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Val	Tyr	Arg	Ser	Pro	Ser	Phe	Gly	Pro	Lys	His	Leu	Glu	Glu	Glu	Glu	
		690				695					700					
Glu	Arg	Asn	Glu	Lys	Glu	Gly	Ser	Asp	Ala	Lys	His	Leu	Gln	Arg	Ser	
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Leu	Leu	Glu	Gln	Glu	Asn	His	Ser	Pro	Leu	Thr	Gly	Ser	Asn	Met	Lys	
				725					730					735		
Tyr	Lys	Thr	Thr	Asn	Gln	Ser	Thr	Glu	Phe	Leu	Ser	Phe	Gln	Asp	Ala	
			740					745					750			
Ser	Ser	Leu	Tyr	Arg	Asn	Ile	Leu	Glu	Lys	Glu	Arg	Glu	Leu	Gln	Gln	
		755					760					765				
Leu	Gly	Ile	Thr	Glu	Tyr	Leu	Arg	Lys	Asn	Ile	Ala	Gln	Leu	Gln	Pro	
		770				775					780					

Asp	Met	Glu	Ala	His	Tyr	Pro	Gly	Ala	His	Glu	Glu	Leu	Lys	Leu	Met
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Glu	Thr	Leu	Met	Tyr	Ser	Arg	Pro	Arg	Lys	Val	Leu	Val	Glu	Gln	Thr
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Lys	Asn	Glu	Tyr	Phe	Glu	Leu	Lys	Ala	Asn	Leu	His	Ala	Glu	Pro	Asp
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		835					840								

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 <212> PRT
 <213> Homo sapiens

<400> 81

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Ser	Leu	Cys	Asn	Cys	Glu	Glu	Lys	Asp	Gly	Thr	Met	Leu	Ile	Asn	Cys
		35					40					45			
Glu	Ala	Lys	Gly	Ile	Lys	Met	Val	Ser	Glu	Ile	Ser	Val	Pro	Pro	Ser
	50					55					60				
Arg	Pro	Phe	Gln	Leu	Ser	Leu	Leu	Asn	Asn	Gly	Leu	Thr	Met	Leu	His
65					70					75					80
Thr	Asn	Asp	Phe	Ser	Gly	Leu	Thr	Asn	Ala	Ile	Ser	Ile	His	Leu	Gly
				85					90					95	
Phe	Asn	Asn	Ile	Ala	Asp	Ile	Glu	Ile	Gly	Ala	Phe	Asn	Gly	Leu	Gly
			100					105					110		
Leu	Leu	Lys	Gln	Leu	His	Ile	Asn	His	Asn	Ser	Leu	Glu	Ile	Leu	Lys
		115					120						125		
Glu	Asp	Thr	Phe	His	Gly	Leu	Glu	Asn	Leu	Glu	Phe	Leu	Gln	Ala	Asp
	130					135					140				
Asn	Asn	Phe	Ile	Thr	Val	Ile	Glu	Pro	Ser	Ala	Phe	Ser	Lys	Leu	Asn
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Arg	Leu	Lys	Val	Leu	Ile	Leu	Asn	Asp	Asn	Ala	Ile	Glu	Ser	Leu	Pro
				165					170						175
Pro	Asn	Ile	Phe	Arg	Phe	Val	Pro	Leu	Thr	His	Leu	Asp	Leu	Arg	Gly
			180					185					190		
Asn	Gln	Leu	Gln	Thr	Leu	Pro	Tyr	Val	Gly	Phe	Leu	Glu	His	Ile	Gly
		195					200					205			
Arg	Ile	Leu	Asp	Leu	Gln	Leu	Glu	Asp	Asn	Lys	Trp	Ala	Cys	Asn	Cys
	210					215					220				
Asp	Leu	Leu	Gln	Leu	Lys	Thr	Trp	Leu	Glu	Asn	Met	Pro	Pro	Gln	Ser
225					230					235					240
Ile	Ile	Gly	Asp	Val	Val	Cys	Asn	Ser	Pro	Pro	Phe	Phe	Lys	Gly	Ser
				245					250					255	
Ile	Leu	Ser	Arg	Leu	Lys	Lys	Glu	Ser	Ile	Cys	Pro	Thr	Pro	Pro	Val
			260					265					270		
Tyr	Glu	Glu	His	Glu	Asp	Pro	Ser	Gly	Ser	Leu	His	Leu	Ala	Ala	Thr
	275						280					285			
Ser	Ser	Ile	Asn	Asp	Ser	Arg	Met	Ser	Thr	Lys	Thr	Thr	Ser	Ile	Leu
	290					295					300				
Lys	Leu	Pro	Thr	Lys	Ala	Pro	Gly	Leu	Ile	Pro	Tyr	Ile	Thr	Lys	Pro
305					310					315					320
Ser	Thr	Gln	Leu	Pro	Gly	Pro	Tyr	Cys	Pro	Ile	Pro	Cys	Asn	Cys	Lys
				325					330					335	
Val	Leu	Ser	Pro	Ser	Gly	Leu	Leu	Ile	His	Cys	Gln	Glu	Arg	Asn	Ile
			340					345					350		
Glu	Ser	Leu	Ser	Asp	Leu	Arg	Pro	Pro	Pro	Gln	Asn	Pro	Arg	Lys	Leu
	355						360					365			
Ile	Leu	Ala	Gly	Asn	Ile	Ile	His	Ser	Leu	Met	Lys	Ser	Ile	Leu	Trp
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Ser Lys Ala Ser Gly Arg Gly Arg Arg Glu Glu
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 <211> 3300
 <212> DNA
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<212> DNA
<213> Homo sapiens

<400> 83
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<213> Homo sapiens

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tgccgtgaat ttttaattgag ggaaaaagga caattgcttc aggatgctct agtatgcact 240
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 <212> PRT
 <213> Homo sapiens

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Phe	Asn	Asn	Ile	Ala	Asp	Ile	Glu	Ile	Gly	Ala	Phe	Asn	Gly	Leu	Gly	
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Tyr	Glu	Glu	His	Glu	Asp	Pro	Ser	Gly	Ser	Leu	His	Leu	Ala	Ala	Thr	
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Ile	Leu	Ala	Gly	Asn	Ile	Ile	His	Ser	Leu	Met	Lys	Ser	Asp	Leu	Val	
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Val	Leu	Glu	Glu	Gly	Ser	Phe	Met	Asn	Leu	Thr	Arg	Leu	Gln	Lys	Leu	
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Tyr	Leu	Asn	Gly	Asn	His	Leu	Thr	Lys	Leu	Ser	Lys	Gly	Met	Phe	Leu	
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Tyr	Leu	Asn	Asn	Asn	Leu	Leu	Gln	Val	Leu	Pro	Pro	His	Ile	Phe	Ser	
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Leu	Pro	Val	Ser	Asn	Ile	Leu	Asp	Asp	Leu	Asp	Leu	Leu	Thr	Gln	Ile	
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Ser	Ser	Leu	Tyr	Arg	Asn	Ile	Leu	Glu	Lys	Glu	Arg	Glu	Leu	Gln	Gln	
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	770					775					780					
Asp	Met	Glu	Ala	His	Tyr	Pro	Gly	Ala	His	Glu	Glu	Leu	Lys	Leu	Met	
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Glu	Thr	Leu	Met	Tyr	Ser	Arg	Pro	Arg	Lys	Val	Leu	Val	Glu	Gln	Thr	
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<210> 86
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 <212> PRT
 <213> Homo sapiens

<400> 86

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Thr	Asn	Asp	Phe	Ser	Gly	Leu	Thr	Asn	Ala	Ile	Ser	Ile	His	Leu	Gly	
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Phe	Asn	Asn	Ile	Ala	Asp	Ile	Glu	Ile	Gly	Ala	Phe	Asn	Gly	Leu	Gly	
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Leu	Leu	Lys	Gln	Leu	His	Ile	Asn	His	Asn	Ser	Leu	Glu	Ile	Leu	Lys	
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Glu	Asp	Thr	Phe	His	Gly	Leu	Glu	Asn	Leu	Glu	Phe	Leu	Gln	Ala	Asp	
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Asn	Asn	Phe	Ile	Thr	Val	Ile	Glu	Pro	Ser	Ala	Phe	Ser	Lys	Leu	Asn	
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Arg	Ile	Leu	Asp	Leu	Gln	Leu	Glu	Asp	Asn	Lys	Trp	Ala	Cys	Asn	Cys
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Asp	Leu	Leu	Gln	Leu	Lys	Thr	Trp	Leu	Glu	Asn	Met	Pro	Pro	Gln	Ser
	225				230					235					240
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Tyr	Glu	Glu	His	Glu	Asp	Pro	Ser	Gly	Ser	Leu	His	Leu	Ala	Ala	Thr
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Ser	Thr	Gln	Leu	Pro	Gly	Pro	Tyr	Cys	Pro	Ile	Pro	Cys	Asn	Cys	Lys
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Glu	Ser	Leu	Ser	Asp	Leu	Arg	Pro	Pro	Pro	Gln	Asn	Pro	Arg	Lys	Leu
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Ile	Leu	Ala	Gly	Asn	Ile	Ile	His	Ser	Leu	Met	Lys	Ser	Asp	Leu	Val
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Val	Leu	Glu	Glu	Gly	Ser	Phe	Met	Asn	Leu	Thr	Arg	Leu	Gln	Lys	Leu
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Tyr	Leu	Asn	Gly	Asn	His	Leu	Thr	Lys	Leu	Ser	Lys	Gly	Met	Phe	Leu
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Gly	Leu	His	Asn	Leu	Glu	Tyr	Leu	Tyr	Leu	Glu	Tyr	Asn	Ala	Ile	Lys
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						455					460				
Tyr	Leu	Asn	Asn	Asn	Leu	Leu	Gln	Val	Leu	Pro	Pro	His	Ile	Phe	Ser
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Asn	Ser	Glu	Ile	Leu	Cys	Pro	Gly	Leu	Val	Asn	Asn	Pro	Ser	Met	Pro
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Thr	Gln	Thr	Ser	Tyr	Leu	Met	Val	Thr	Thr	Pro	Ala	Thr	Thr	Thr	Asn
			580					585					590		
Thr	Ala	Asp	Thr	Ile	Leu	Arg	Ser	Leu	Thr	Asp	Ala	Val	Pro	Leu	Ser
			595				600					605			
Val	Leu	Ile	Leu	Gly	Leu	Leu	Ile	Met	Phe	Ile	Thr	Ile	Val	Phe	Cys
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					630					635					640
Lys	Lys	Gln	Val	Asp	Glu	Gln	Met	Arg	Asp	Asn	Ser	Pro	Val	His	Leu
				645					650					655	
Gln	Tyr	Ser	Met	Tyr	Gly	His	Lys	Thr	Thr	His	His	Thr	Thr	Glu	Arg
			660					665						670	

Pro	Ser	Ala	Ser	Leu	Tyr	Glu	Gln	His	Met	Val	Ser	Pro	Met	Val	His		
		675					680					685					
Val	Tyr	Arg	Ser	Pro	Ser	Phe	Gly	Pro	Lys	His	Leu	Glu	Glu	Glu	Glu		
		690				695					700						
Glu	Arg	Asn	Glu	Lys	Glu	Gly	Ser	Asp	Ala	Lys	His	Leu	Gln	Arg	Ser		
705					710					715					720		
Leu	Leu	Glu	Gln	Glu	Asn	His	Ser	Pro	Leu	Thr	Gly	Ser	Asn	Met	Lys		
				725					730					735			
Tyr	Lys	Thr	Thr	Asn	Gln	Ser	Thr	Glu	Phe	Leu	Ser	Phe	Gln	Asp	Ala		
			740					745					750				
Ser	Ser	Leu	Tyr	Arg	Asn	Ile	Leu	Glu	Lys	Glu	Arg	Glu	Leu	Gln	Gln		
		755					760					765					
Leu	Gly	Ile	Thr	Glu	Tyr	Leu	Arg	Lys	Asn	Ile	Ala	Gln	Leu	Gln	Pro		
770						775					780						
Asp	Met	Glu	Ala	His	Tyr	Pro	Gly	Ala	His	Glu	Glu	Leu	Lys	Leu	Met		
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Lys	Asn	Glu	Tyr	Phe	Glu	Leu	Lys	Ala	Asn	Leu	His	Ala	Glu	Pro	Asp		
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Tyr	Leu	Glu	Val	Leu	Glu	Gln	Gln	Thr									
		835					840										

<210> 87
 <211> 841
 <212> PRT
 <213> Homo sapiens

<400> 87

Met	Lys	Leu	Trp	Ile	His	Leu	Phe	Tyr	Ser	Ser	Leu	Leu	Ala	Cys	Ile		
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			20					25					30				
Ser	Leu	Cys	Asn	Cys	Glu	Glu	Lys	Asp	Gly	Thr	Met	Leu	Ile	Asn	Cys		
		35					40					45					
Glu	Ala	Lys	Gly	Ile	Lys	Met	Val	Ser	Glu	Ile	Ser	Val	Pro	Pro	Ser		
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			660					665					670			
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			740					745					750			
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 <212> DNA
 <213> Homo sapiens

<400> 88

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<400> 89

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 <213> Homo sapiens

<400> 90						
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<400> 91															
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Ser	Leu	Cys	Asn	Cys	Glu	Glu	Lys	Asp	Gly	Thr	Met	Leu	Ile	Asn	Cys
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Glu	Ala	Lys	Gly	Ile	Lys	Met	Val	Ser	Glu	Ile	Ser	Val	Pro	Pro	Ser
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Arg	Pro	Phe	Gln	Leu	Ser	Leu	Leu	Asn	Asn	Gly	Leu	Thr	Met	Leu	His
65					70					75					80

Thr	Asn	Asp	Phe	Ser	Gly	Leu	Thr	Asn	Ala	Ile	Ser	Ile	His	Leu	Gly	
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Phe	Asn	Asn	Ile	Ala	Asp	Ile	Glu	Ile	Gly	Ala	Phe	Asn	Gly	Leu	Gly	
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Tyr	Glu	Glu	His	Glu	Asp	Pro	Ser	Gly	Ser	Leu	His	Leu	Ala	Ala	Thr	
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Lys	Leu	Pro	Thr	Lys	Ala	Pro	Gly	Leu	Ile	Pro	Tyr	Ile	Thr	Lys	Pro	
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 <211> 841
 <212> PRT
 <213> Homo sapiens

<400> 92

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Glu	Ala	Lys	Gly	Ile	Lys	Met	Val	Ser	Glu	Ile	Ser	Val	Pro	Pro	Ser	
	50					55					60					
Arg	Pro	Phe	Gln	Leu	Ser	Leu	Leu	Asn	Asn	Gly	Leu	Thr	Met	Leu	His	
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Thr	Asn	Asp	Phe	Ser	Gly	Leu	Thr	Asn	Ala	Ile	Ser	Ile	His	Leu	Gly	
			85						90					95		
Phe	Asn	Asn	Ile	Ala	Asp	Ile	Glu	Ile	Gly	Ala	Phe	Asn	Gly	Leu	Gly	
			100				105						110			
Leu	Leu	Lys	Gln	Leu	His	Ile	Asn	His	Asn	Ser	Leu	Glu	Ile	Leu	Lys	
		115					120					125				
Glu	Asp	Thr	Phe	His	Gly	Leu	Glu	Asn	Leu	Glu	Phe	Leu	Gln	Ala	Asp	
	130					135					140					
Asn	Asn	Phe	Ile	Thr	Val	Ile	Glu	Pro	Ser	Ala	Phe	Ser	Lys	Leu	Asn	
145					150					155					160	
Arg	Leu	Lys	Val	Leu	Ile	Leu	Asn	Asp	Asn	Ala	Ile	Glu	Ser	Leu	Pro	
			165					170						175		
Pro	Asn	Ile	Phe	Arg	Phe	Val	Pro	Leu	Thr	His	Leu	Asp	Leu	Arg	Gly	
		180					185					190				
Asn	Gln	Leu	Gln	Thr	Leu	Pro	Tyr	Val	Gly	Phe	Leu	Glu	His	Ile	Gly	
		195					200					205				
Arg	Ile	Leu	Asp	Leu	Gln	Leu	Glu	Asp	Asn	Lys	Trp	Ala	Cys	Asn	Cys	
	210					215					220					
Asp	Leu	Leu	Gln	Leu	Lys	Thr	Trp	Leu	Glu	Asn	Met	Pro	Pro	Gln	Ser	
225					230					235					240	
Ile	Ile	Gly	Asp	Val	Val	Cys	Asn	Ser	Pro	Pro	Phe	Phe	Lys	Gly	Ser	
			245					250						255		
Ile	Leu	Ser	Arg	Leu	Lys	Lys	Glu	Ser	Ile	Cys	Pro	Thr	Pro	Pro	Val	
		260					265						270			
Tyr	Glu	Glu	His	Glu	Asp	Pro	Ser	Gly	Ser	Leu	His	Leu	Ala	Ala	Thr	
	275						280					285				
Ser	Ser	Ile	Asn	Asp	Ser	Arg	Met	Ser	Thr	Lys	Thr	Thr	Ser	Ile	Leu	
	290					295					300					
Lys	Leu	Pro	Thr	Lys	Ala	Pro	Gly	Leu	Ile	Pro	Tyr	Ile	Thr	Lys	Pro	
305					310					315					320	
Ser	Thr	Gln	Leu	Pro	Gly	Pro	Tyr	Cys	Pro	Ile	Pro	Cys	Asn	Cys	Lys	
			325					330						335		
Val	Leu	Ser	Pro	Ser	Gly	Leu	Leu	Ile	His	Cys	Gln	Glu	Arg	Asn	Ile	
		340					345					350				
Glu	Ser	Leu	Ser	Asp	Leu	Arg	Pro	Pro	Pro	Gln	Asn	Pro	Arg	Lys	Leu	
	355					360						365				
Ile	Leu	Ala	Gly	Asn	Ile	Ile	His	Ser	Leu	Met	Lys	Ser	Asp	Leu	Val	
	370				375						380					
Glu	Tyr	Phe	Thr	Leu	Glu	Met	Leu	His	Leu	Gly	Asn	Asn	Arg	Ile	Glu	
385					390					395					400	
Val	Leu	Glu	Glu	Gly	Ser	Phe	Met	Asn	Leu	Thr	Arg	Leu	Gln	Lys	Leu	
			405						410					415		
Tyr	Leu	Asn	Gly	Asn	His	Leu	Thr	Lys	Leu	Ser	Lys	Gly	Met	Phe	Leu	
		420						425					430			
Gly	Leu	His	Asn	Leu	Glu	Tyr	Leu	Tyr	Leu	Glu	Tyr	Asn	Ala	Ile	Lys	
	435					440						445				
Glu	Ile	Leu	Pro	Gly	Thr	Phe	Asn	Pro	Met	Pro	Lys	Leu	Lys	Val	Leu	
	450					455					460					
Tyr	Leu	Asn	Asn	Asn	Leu	Leu	Gln	Val	Leu	Pro	His	Ile	Phe	Ser		
465					470					475				480		
Gly	Val	Pro	Leu	Thr	Lys	Val	Asn	Leu	Lys	Thr	Asn	Gln	Phe	Thr	His	
			485						490					495		

Leu	Pro	Val	Ser	Asn	Ile	Leu	Asp	Asp	Leu	Asp	Leu	Leu	Thr	Gln	Ile		
			500					505					510				
Asp	Leu	Glu	Asp	Asn	Pro	Trp	Asp	Cys	Ser	Cys	Asp	Leu	Val	Gly	Leu		
		515					520					525					
Gln	Gln	Trp	Ile	Gln	Lys	Leu	Ser	Lys	Asn	Thr	Val	Thr	Asp	Asp	Ile		
	530					535					540						
Leu	Cys	Thr	Ser	Pro	Gly	His	Leu	Asp	Lys	Lys	Glu	Leu	Lys	Ala	Leu		
545					550					555					560		
Asn	Ser	Glu	Ile	Leu	Cys	Pro	Gly	Leu	Val	Asn	Asn	Pro	Ser	Met	Pro		
				565					570					575			
Thr	Gln	Thr	Ser	Tyr	Leu	Met	Val	Thr	Thr	Pro	Ala	Thr	Thr	Thr	Asn		
			580					585						590			
Thr	Ala	Asp	Thr	Ile	Leu	Arg	Ser	Leu	Thr	Asp	Ala	Val	Pro	Leu	Ser		
	595						600					605					
Val	Leu	Ile	Leu	Gly	Leu	Leu	Ile	Met	Phe	Ile	Thr	Ile	Val	Phe	Cys		
	610					615					620						
Ala	Ala	Gly	Ile	Val	Val	Leu	Val	Leu	His	Arg	Arg	Arg	Arg	Tyr	Lys		
625					630					635					640		
Lys	Lys	Gln	Val	Asp	Glu	Gln	Met	Arg	Asp	Asn	Ser	Pro	Val	His	Leu		
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Gln	Tyr	Ser	Met	Tyr	Gly	His	Lys	Thr	Thr	His	His	Thr	Thr	Glu	Arg		
			660					665					670				
Pro	Ser	Ala	Ser	Leu	Tyr	Glu	Gln	His	Met	Val	Ser	Pro	Met	Val	His		
		675					680					685					
Val	Tyr	Arg	Ser	Pro	Ser	Phe	Gly	Pro	Lys	His	Leu	Glu	Glu	Glu	Glu		
	690					695					700						
Glu	Arg	Asn	Glu	Lys	Glu	Gly	Ser	Asp	Ala	Lys	His	Leu	Gln	Arg	Ser		
705					710					715					720		
Leu	Leu	Glu	Gln	Glu	Asn	His	Ser	Pro	Leu	Thr	Gly	Ser	Asn	Met	Lys		
				725					730					735			
Tyr	Lys	Thr	Thr	Asn	Gln	Ser	Thr	Glu	Phe	Leu	Ser	Phe	Gln	Asp	Ala		
			740					745					750				
Ser	Ser	Leu	Tyr	Arg	Asn	Ile	Leu	Glu	Lys	Glu	Arg	Glu	Leu	Gln	Gln		
		755					760					765					
Leu	Gly	Ile	Thr	Glu	Tyr	Leu	Arg	Lys	Asn	Ile	Ala	Gln	Leu	Gln	Pro		
	770					775					780						
Asp	Met	Glu	Ala	His	Tyr	Pro	Gly	Ala	His	Glu	Glu	Leu	Lys	Leu	Met		
785					790					795					800		
Glu	Thr	Leu	Met	Tyr	Ser	Arg	Pro	Arg	Lys	Val	Leu	Val	Glu	Gln	Thr		
				805					810					815			
Lys	Asn	Glu	Tyr	Phe	Glu	Leu	Lys	Ala	Asn	Leu	His	Ala	Glu	Pro	Asp		
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 Ser Leu His Ser Gln Thr Pro Val Leu Ser Ser Arg Gly Ser Cys Asp
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 Ser Leu Cys Asn Cys Glu Glu Lys Asp Gly Thr Met Leu Ile Asn Cys
 35 40 45
 Glu Ala Lys Gly Ile Lys Met Val Ser Glu Ile Ser Val Pro Pro Ser
 50 55 60
 Arg Pro Phe Gln Leu Ser Leu Leu Asn Asn Gly Leu Thr Met Leu His
 65 70 75 80
 Thr Asn Asp Phe Ser Gly Leu Thr Asn Ala Ile Ser Ile His Leu Gly
 85 90 95

Met	Lys	Leu	Trp	Ile	His	Leu	Phe	Tyr	Ser	Ser	Leu	Leu	Ala	Cys	Ile	
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Ser	Leu	His	Ser	Gln	Thr	Pro	Val	Leu	Ser	Ser	Arg	Gly	Ser	Cys	Asp	
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Ser	Leu	Cys	Asn	Cys	Glu	Glu	Lys	Asp	Gly	Thr	Met	Leu	Ile	Asn	Cys	
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Glu	Ala	Lys	Gly	Ile	Lys	Met	Val	Ser	Glu	Ile	Ser	Val	Pro	Pro	Ser	
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Arg	Pro	Phe	Gln	Leu	Ser	Leu	Leu	Asn	Asn	Gly	Leu	Thr	Met	Leu	His	
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Thr	Asn	Asp	Phe	Ser	Gly	Leu	Thr	Asn	Ala	Ile	Ser	Ile	His	Leu	Gly	
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Phe	Asn	Asn	Ile	Ala	Asp	Ile	Glu	Ile	Gly	Ala	Phe	Asn	Gly	Leu	Gly	
			100					105					110			
Leu	Leu	Lys	Gln	Leu	His	Ile	Asn	His	Asn	Ser	Leu	Glu	Ile	Leu	Lys	
		115					120					125				
Glu	Asp	Thr	Phe	His	Gly	Leu	Glu	Asn	Leu	Glu	Phe	Leu	Gln	Ala	Asp	
	130					135					140					
Asn	Asn	Phe	Ile	Thr	Val	Ile	Glu	Pro	Ser	Ala	Phe	Ser	Lys	Leu	Asn	
145					150					155					160	
Arg	Leu	Lys	Val	Leu	Ile	Leu	Asn	Asp	Asn	Ala	Ile	Glu	Ser	Leu	Pro	
			165					170						175		
Pro	Asn	Ile	Phe	Arg	Phe	Val	Pro	Leu	Thr	His	Leu	Asp	Leu	Arg	Gly	
			180					185					190			
Asn	Gln	Leu	Gln	Thr	Leu	Pro	Tyr	Val	Gly	Phe	Leu	Glu	His	Ile	Gly	
	195						200					205				
Arg	Ile	Leu	Asp	Leu	Gln	Leu	Glu	Asp	Asn	Lys	Trp	Ala	Cys	Asn	Cys	
	210					215					220					
Asp	Leu	Leu	Gln	Leu	Lys	Thr	Trp	Leu	Glu	Asn	Met	Pro	Pro	Gln	Ser	
225					230					235					240	
Ile	Ile	Gly	Asp	Val	Val	Cys	Asn	Ser	Pro	Pro	Phe	Phe	Lys	Gly	Ser	
			245					250						255		
Ile	Leu	Ser	Arg	Leu	Lys	Lys	Glu	Ser	Ile	Cys	Pro	Thr	Pro	Pro	Val	
		260						265					270			
Tyr	Glu	Glu	His	Glu	Asp	Pro	Ser	Gly	Ser	Leu	His	Leu	Ala	Ala	Thr	
	275						280					285				
Ser	Ser	Ile	Asn	Asp	Ser	Arg	Met	Ser	Thr	Lys	Thr	Thr	Ser	Ile	Leu	
	290					295					300					
Lys	Leu	Pro	Thr	Lys	Ala	Pro	Gly	Leu	Ile	Pro	Tyr	Ile	Thr	Lys	Pro	
305					310					315					320	
Ser	Thr	Gln	Leu	Pro	Gly	Pro	Tyr	Cys	Pro	Ile	Pro	Cys	Asn	Cys	Lys	
			325					330						335		
Val	Leu	Ser	Pro	Ser	Gly	Leu	Leu	Ile	His	Cys	Gln	Glu	Arg	Asn	Ile	
		340						345					350			
Glu	Ser	Leu	Ser	Asp	Leu	Arg	Pro	Pro	Gln	Asn	Pro	Arg	Lys	Leu		
	355						360				365					
Ile	Leu	Ala	Gly	Asn	Ile	Ile	His	Ser	Leu	Met	Lys	Ser	Asp	Leu	Val	
	370				375						380					
Glu	Tyr	Phe	Thr	Leu	Glu	Met	Leu	His	Leu	Gly	Asn	Asn	Arg	Ile	Glu	
385					390					395					400	
Val	Leu	Glu	Glu	Gly	Ser	Phe	Met	Asn	Leu	Thr	Arg	Leu	Gln	Lys	Leu	
			405					410						415		
Tyr	Leu	Asn	Gly	Asn	His	Leu	Thr	Lys	Leu	Ser	Lys	Gly	Met	Phe	Leu	
		420						425					430			
Gly	Leu	His	Asn	Leu	Glu	Tyr	Leu	Tyr	Leu	Glu	Tyr	Asn	Ala	Ile	Lys	
	435						440					445				
Glu	Ile	Leu	Pro	Gly	Thr	Phe	Asn	Pro	Met	Pro	Lys	Leu	Lys	Val	Leu	
	450					455					460					
Tyr	Leu	Asn	Asn	Asn	Leu	Leu	Gln	Val	Leu	Pro	Pro	His	Ile	Phe	Ser	
465					470					475					480	
Gly	Val	Pro	Leu	Thr	Lys	Val	Asn	Leu	Lys	Thr	Asn	Gln	Phe	Thr	His	
			485						490					495		
Leu	Pro	Val	Ser	Asn	Ile	Leu	Asp	Asp	Leu	Asp	Leu	Leu	Thr	Gln	Ile	
			500					505					510			

Asp Leu Glu Asp Asn Pro Trp Asp Cys Ser Cys Asp Leu Val Gly Leu
 515 520 525
 Gln Gln Trp Ile Gln Lys Leu Ser Lys Asn Thr Val Thr Asp Asp Ile
 530 535 540
 Leu Cys Thr Ser Pro Gly His Leu Asp Lys Lys Glu Leu Lys Ala Leu
 545 550 555 560
 Asn Ser Glu Ile Leu Cys Pro Gly Leu Val Asn Asn Pro Ser Met Pro
 565 570 575
 Thr Gln Thr Ser Tyr Leu Met Val Thr Thr Pro Ala Thr Thr Asn
 580 585 590
 Thr Ala Asp Thr Ile Leu Arg Ser Leu Thr Asp Ala Val Pro Leu Ser
 595 600 605
 Val Leu Ile Leu Gly Leu Leu Ile Met Phe Ile Thr Ile Val Phe Cys
 610 615 620
 Ala Ala Gly Ile Val Val Leu Val Leu His Arg Arg Arg Arg Tyr Lys
 625 630 635 640
 Lys Lys Gln Val Asp Glu Gln Met Arg Asp Asn Ser Pro Val His Leu
 645 650 655
 Gln Tyr Ser Met Tyr Gly His Lys Thr Thr His His Thr Thr Glu Arg
 660 665 670
 Pro Ser Ala Ser Leu Tyr Glu Gln His Met Val Ser Pro Met Val His
 675 680 685
 Val Tyr Arg Ser Pro Ser Phe Gly Pro Lys His Leu Glu Glu Glu Glu
 690 695 700
 Glu Arg Asn Glu Lys Glu Gly Ser Asp Ala Lys His Leu Gln Arg Ser
 705 710 715 720
 Leu Leu Glu Gln Glu Asn His Ser Pro Leu Thr Gly Ser Asn Met Lys
 725 730 735
 Tyr Lys Thr Thr Asn Gln Ser Thr Glu Phe Leu Ser Phe Gln Asp Ala
 740 745 750
 Ser Ser Leu Tyr Arg Asn Ile Leu Glu Lys Glu Arg Glu Leu Gln Gln
 755 760 765
 Leu Gly Ile Thr Glu Tyr Leu Arg Lys Asn Ile Ala Gln Leu Gln Pro
 770 775 780
 Asp Met Glu Ala His Tyr Pro Gly Ala His Glu Glu Leu Lys Leu Met
 785 790 795 800
 Glu Thr Leu Met Tyr Ser Arg Pro Arg Lys Val Leu Val Glu Gln Thr
 805 810 815
 Lys Asn Glu Tyr Phe Glu Leu Lys Ala Asn Leu His Ala Glu Pro Asp
 820 825 830
 Tyr Leu Glu Val Leu Glu Gln Gln Thr
 835 840

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<400> 95
 Ala Ser Leu Tyr Glu Gln His Met Gly Ala His Glu Glu Leu Lys Leu
 1 5 10 15

<210> 96
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<400> 96
 Ser Ala Ser Leu Tyr Glu Gln His Met Gly Ala His Glu Glu Leu Lys
 1 5 10 15
 Leu Met

<210> 97
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<400> 97
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His Glu Glu Leu Lys Leu Met Glu Thr Leu Met Tyr
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<210> 98
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<400> 98
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1 5 10 15
Arg Gly Arg Arg Glu Glu
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<211> 23
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<400> 99
Asn Ile Ile His Ser Leu Met Lys Ser Ile Leu Trp Ser Lys Ala Ser
1 5 10 15
Gly Arg Gly Arg Arg Glu Glu
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<211> 28
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Leu Ile Leu Ala Gly Asn Ile Ile His Ser Leu Met Lys Ser Ile Leu
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Trp Ser Lys Ala Ser Gly Arg Gly Arg Arg Glu Glu
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<211> 23
<212> PRT
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<400> 101
Gly Asn Ile Ile His Ser Leu Met Asn Pro Ser Phe Gly Pro Lys His
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Leu Glu Glu Glu Glu Arg
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<210> 102
<211> 24

<212> PRT
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<400> 102
 Ala Gly Asn Ile Ile His Ser Leu Met Asn Pro Ser Phe Gly Pro Lys
 1 5 10 15
 His Leu Glu Glu Glu Glu Arg
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<210> 103
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 <212> PRT
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 Arg Lys Leu Ile Leu Ala Gly Asn Ile Ile His Ser Leu Met Asn Pro
 1 5 10 15
 Ser Phe Gly Pro Lys His Leu Glu Glu Glu Glu Arg
 20 25

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 <211> 841
 <212> PRT
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<400> 104
 Met Lys Leu Trp Ile His Leu Phe Tyr Ser Ser Leu Leu Ala Cys Ile
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 Ser Leu His Ser Gln Thr Pro Val Leu Ser Ser Arg Gly Ser Cys Asp
 20 25 30
 Ser Leu Cys Asn Cys Glu Glu Lys Asp Gly Thr Met Leu Ile Asn Cys
 35 40 45
 Glu Ala Lys Gly Ile Lys Met Val Ser Glu Ile Ser Val Pro Pro Ser
 50 55 60
 Arg Pro Phe Gln Leu Ser Leu Leu Asn Asn Gly Leu Thr Met Leu His
 65 70 75 80
 Thr Asn Asp Phe Ser Gly Leu Thr Asn Ala Ile Ser Ile His Leu Gly
 85 90 95
 Phe Asn Asn Ile Ala Asp Ile Glu Ile Gly Ala Phe Asn Gly Leu Gly
 100 105 110
 Leu Leu Lys Gln Leu His Ile Asn His Asn Ser Leu Glu Ile Leu Lys
 115 120 125
 Glu Asp Thr Phe His Gly Leu Glu Asn Leu Glu Phe Leu Gln Ala Asp
 130 135 140
 Asn Asn Phe Ile Thr Val Ile Glu Pro Ser Ala Phe Ser Lys Leu Asn
 145 150 155 160
 Arg Leu Lys Val Leu Ile Leu Asn Asp Asn Ala Ile Glu Ser Leu Pro
 165 170 175
 Pro Asn Ile Phe Arg Phe Val Pro Leu Thr His Leu Asp Leu Arg Gly
 180 185 190
 Asn Gln Leu Gln Thr Leu Pro Tyr Val Gly Phe Leu Glu His Ile Gly
 195 200 205
 Arg Ile Leu Asp Leu Gln Leu Glu Asp Asn Lys Trp Ala Cys Asn Cys
 210 215 220
 Asp Leu Leu Gln Leu Lys Thr Trp Leu Glu Asn Met Pro Pro Gln Ser
 225 230 235 240
 Ile Ile Gly Asp Val Val Cys Asn Ser Pro Pro Phe Phe Lys Gly Ser
 245 250 255
 Ile Leu Ser Arg Leu Lys Lys Glu Ser Ile Cys Pro Thr Pro Pro Val
 260 265 270
 Tyr Glu Glu His Glu Asp Pro Ser Gly Ser Leu His Leu Ala Ala Thr
 275 280 285

Ser	Ser	Ile	Asn	Asp	Ser	Arg	Met	Ser	Thr	Lys	Thr	Thr	Ser	Ile	Leu
290						295					300				
Lys	Leu	Pro	Thr	Lys	Ala	Pro	Gly	Leu	Ile	Pro	Tyr	Ile	Thr	Lys	Pro
305					310					315					320
Ser	Thr	Gln	Leu	Pro	Gly	Pro	Tyr	Cys	Pro	Ile	Pro	Cys	Asn	Cys	Lys
				325					330					335	
Val	Leu	Ser	Pro	Ser	Gly	Leu	Leu	Ile	His	Cys	Gln	Glu	Arg	Asn	Ile
			340					345					350		
Glu	Ser	Leu	Ser	Asp	Leu	Arg	Pro	Pro	Gln	Asn	Pro	Arg	Lys	Leu	
		355					360				365				
Ile	Leu	Ala	Gly	Asn	Ile	Ile	His	Ser	Leu	Met	Lys	Ser	Asp	Leu	Val
	370					375					380				
Glu	Tyr	Phe	Thr	Leu	Glu	Met	Leu	His	Leu	Gly	Asn	Asn	Arg	Ile	Glu
385					390					395					400
Val	Leu	Glu	Glu	Gly	Ser	Phe	Met	Asn	Leu	Thr	Arg	Leu	Gln	Lys	Leu
				405					410					415	
Tyr	Leu	Asn	Gly	Asn	His	Leu	Thr	Lys	Leu	Ser	Lys	Gly	Met	Phe	Leu
			420					425					430		
Gly	Leu	His	Asn	Leu	Glu	Tyr	Leu	Tyr	Leu	Glu	Tyr	Asn	Ala	Ile	Lys
		435					440					445			
Glu	Ile	Leu	Pro	Gly	Thr	Phe	Asn	Pro	Met	Pro	Lys	Leu	Lys	Val	Leu
	450					455					460				
Tyr	Leu	Asn	Asn	Asn	Leu	Leu	Gln	Val	Leu	Pro	Pro	His	Ile	Phe	Ser
465					470					475					480
Gly	Val	Pro	Leu	Thr	Lys	Val	Asn	Leu	Lys	Thr	Asn	Gln	Phe	Thr	His
				485					490					495	
Leu	Pro	Val	Ser	Asn	Ile	Leu	Asp	Asp	Leu	Asp	Leu	Leu	Thr	Gln	Ile
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Asp	Leu	Glu	Asp	Asn	Pro	Trp	Asp	Cys	Ser	Cys	Asp	Leu	Val	Gly	Leu
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Gln	Gln	Trp	Ile	Gln	Lys	Leu	Ser	Lys	Asn	Thr	Val	Thr	Asp	Asp	Ile
	530					535					540				
Leu	Cys	Thr	Ser	Pro	Gly	His	Leu	Asp	Lys	Lys	Glu	Leu	Lys	Ala	Leu
545					550					555					560
Asn	Ser	Glu	Ile	Leu	Cys	Pro	Gly	Leu	Val	Asn	Asn	Pro	Ser	Met	Pro
				565					570					575	
Thr	Gln	Thr	Ser	Tyr	Leu	Met	Val	Thr	Thr	Pro	Ala	Thr	Thr	Thr	Asn
			580					585					590		
Thr	Ala	Asp	Thr	Ile	Leu	Arg	Ser	Leu	Thr	Asp	Ala	Val	Pro	Leu	Ser
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Val	Leu	Ile	Leu	Gly	Leu	Leu	Ile	Met	Phe	Ile	Thr	Ile	Val	Phe	Cys
	610					615					620				
Ala	Ala	Gly	Ile	Val	Val	Leu	Val	Leu	His	Arg	Arg	Arg	Arg	Tyr	Lys
625						630				635					640
Lys	Lys	Gln	Val	Asp	Glu	Gln	Met	Arg	Asp	Asn	Ser	Pro	Val	His	Leu
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Gln	Tyr	Ser	Met	Tyr	Gly	His	Lys	Thr	Thr	His	His	Thr	Thr	Glu	Arg
			660					665					670		
Pro	Ser	Ala	Ser	Leu	Tyr	Glu	Gln	His	Met	Val	Ser	Pro	Met	Val	His
		675					680					685			
Val	Tyr	Arg	Ser	Pro	Ser	Phe	Gly	Pro	Lys	His	Leu	Glu	Glu	Glu	Glu
	690					695					700				
Glu	Arg	Asn	Glu	Lys	Glu	Gly	Ser	Asp	Ala	Lys	His	Leu	Gln	Arg	Ser
705					710					715					720
Leu	Leu	Glu	Gln	Glu	Asn	His	Ser	Pro	Leu	Thr	Gly	Ser	Asn	Met	Lys
				725					730					735	
Tyr	Lys	Thr	Thr	Asn	Gln	Ser	Thr	Glu	Phe	Leu	Ser	Phe	Gln	Asp	Ala
			740					745					750		
Ser	Ser	Leu	Tyr	Arg	Asn	Ile	Leu	Glu	Lys	Glu	Arg	Glu	Leu	Gln	Gln
		755					760					765			
Leu	Gly	Ile	Thr	Glu	Tyr	Leu	Arg	Lys	Asn	Ile	Ala	Gln	Leu	Gln	Pro
	770					775					780				
Asp	Met	Glu	Ala	His	Tyr	Pro	Gly	Ala	His	Glu	Glu	Leu	Lys	Leu	Met
785					790					795					800

Glu	Thr	Leu	Met	Tyr	Ser	Arg	Pro	Arg	Lys	Val	Leu	Val	Glu	Gln	Thr
				805					810					815	
Lys	Asn	Glu	Tyr	Phe	Glu	Leu	Lys	Ala	Asn	Leu	His	Ala	Glu	Pro	Asp
			820					825					830		
Tyr	Leu	Glu	Val	Leu	Glu	Gln	Gln	Thr							
		835					840								

<210> 105
 <211> 732
 <212> PRT
 <213> Homo sapiens

<400> 105

Met	Lys	Leu	Trp	Ile	His	Leu	Phe	Tyr	Ser	Ser	Leu	Leu	Ala	Cys	Ile
1				5					10					15	
Ser	Leu	His	Ser	Gln	Thr	Pro	Val	Leu	Ser	Ser	Arg	Gly	Ser	Cys	Asp
			20					25					30		
Ser	Leu	Cys	Asn	Cys	Glu	Glu	Lys	Asp	Gly	Thr	Met	Leu	Ile	Asn	Cys
		35					40					45			
Glu	Ala	Lys	Gly	Ile	Lys	Met	Val	Ser	Glu	Ile	Ser	Val	Pro	Pro	Ser
	50					55					60				
Arg	Pro	Phe	Gln	Leu	Ser	Leu	Leu	Asn	Asn	Gly	Leu	Thr	Met	Leu	His
65					70					75					80
Thr	Asn	Asp	Phe	Ser	Gly	Leu	Thr	Asn	Ala	Ile	Ser	Ile	His	Leu	Gly
				85					90					95	
Phe	Asn	Asn	Ile	Ala	Asp	Ile	Glu	Ile	Gly	Ala	Phe	Asn	Gly	Leu	Gly
			100					105					110		
Leu	Leu	Lys	Gln	Leu	His	Ile	Asn	His	Asn	Ser	Leu	Glu	Ile	Leu	Lys
		115					120					125			
Glu	Asp	Thr	Phe	His	Gly	Leu	Glu	Asn	Leu	Glu	Phe	Leu	Gln	Ala	Asp
	130					135					140				
Asn	Asn	Phe	Ile	Thr	Val	Ile	Glu	Pro	Ser	Ala	Phe	Ser	Lys	Leu	Asn
145					150					155					160
Arg	Leu	Lys	Val	Leu	Ile	Leu	Asn	Asp	Asn	Ala	Ile	Glu	Ser	Leu	Pro
			165						170					175	
Pro	Asn	Ile	Phe	Arg	Phe	Val	Pro	Leu	Thr	His	Leu	Asp	Leu	Arg	Gly
			180					185					190		
Asn	Gln	Leu	Gln	Thr	Leu	Pro	Tyr	Val	Gly	Phe	Leu	Glu	His	Ile	Gly
		195					200					205			
Arg	Ile	Leu	Asp	Leu	Gln	Leu	Glu	Asp	Asn	Lys	Trp	Ala	Cys	Asn	Cys
	210					215					220				
Asp	Leu	Leu	Gln	Leu	Lys	Thr	Trp	Leu	Glu	Asn	Met	Pro	Pro	Gln	Ser
225					230					235					240
Ile	Ile	Gly	Asp	Val	Val	Cys	Asn	Ser	Pro	Pro	Phe	Phe	Lys	Gly	Ser
				245					250					255	
Ile	Leu	Ser	Arg	Leu	Lys	Lys	Glu	Ser	Ile	Cys	Pro	Thr	Pro	Pro	Val
			260				265						270		
Tyr	Glu	Glu	His	Glu	Asp	Pro	Ser	Gly	Ser	Leu	His	Leu	Ala	Ala	Thr
	275						280					285			
Ser	Ser	Ile	Asn	Asp	Ser	Arg	Met	Ser	Thr	Lys	Thr	Thr	Ser	Ile	Leu
	290					295					300				
Lys	Leu	Pro	Thr	Lys	Ala	Pro	Gly	Leu	Ile	Pro	Tyr	Ile	Thr	Lys	Pro
305					310					315					320
Ser	Thr	Gln	Leu	Pro	Gly	Pro	Tyr	Cys	Pro	Ile	Pro	Cys	Asn	Cys	Lys
				325					330					335	
Val	Leu	Ser	Pro	Ser	Gly	Leu	Leu	Ile	His	Cys	Gln	Glu	Arg	Asn	Ile
			340					345					350		
Glu	Ser	Leu	Ser	Asp	Leu	Arg	Pro	Pro	Pro	Gln	Asn	Pro	Arg	Lys	Leu
	355						360					365			
Ile	Leu	Ala	Gly	Asn	Ile	Ile	His	Ser	Leu	Met	Lys	Ser	Asp	Leu	Val
	370					375					380				
Glu	Tyr	Phe	Thr	Leu	Glu	Met	Leu	His	Leu	Gly	Asn	Asn	Arg	Ile	Glu
385					390					395					400

Val	Leu	Glu	Glu	Gly	Ser	Phe	Met	Asn	Leu	Thr	Arg	Leu	Gln	Lys	Leu	
				405					410					415		
Tyr	Leu	Asn	Gly	Asn	His	Leu	Thr	Lys	Leu	Ser	Lys	Gly	Met	Phe	Leu	
			420					425					430			
Gly	Leu	His	Asn	Leu	Glu	Tyr	Leu	Tyr	Leu	Glu	Tyr	Asn	Ala	Ile	Lys	
		435					440					445				
Glu	Ile	Leu	Pro	Gly	Thr	Phe	Asn	Pro	Met	Pro	Lys	Leu	Lys	Val	Leu	
	450					455					460					
Tyr	Leu	Asn	Asn	Asn	Leu	Gln	Val	Leu	Pro	Pro	His	Ile	Phe	Ser		
465					470				475					480		
Gly	Val	Pro	Leu	Thr	Lys	Val	Asn	Leu	Lys	Thr	Asn	Gln	Phe	Thr	His	
				485				490						495		
Leu	Pro	Val	Ser	Asn	Ile	Leu	Asp	Asp	Leu	Asp	Leu	Leu	Thr	Gln	Ile	
			500					505					510			
Asp	Leu	Glu	Asp	Asn	Pro	Trp	Asp	Cys	Ser	Cys	Asp	Leu	Val	Gly	Leu	
	515						520					525				
Gln	Gln	Trp	Ile	Gln	Lys	Leu	Ser	Lys	Asn	Thr	Val	Thr	Asp	Asp	Ile	
	530					535					540					
Leu	Cys	Thr	Ser	Pro	Gly	His	Leu	Asp	Lys	Lys	Glu	Leu	Lys	Ala	Leu	
545					550				555						560	
Asn	Ser	Glu	Ile	Leu	Cys	Pro	Gly	Leu	Val	Asn	Asn	Pro	Ser	Met	Pro	
				565					570					575		
Thr	Gln	Thr	Ser	Tyr	Leu	Met	Val	Thr	Thr	Pro	Ala	Thr	Thr	Thr	Asn	
			580					585					590			
Thr	Ala	Asp	Thr	Ile	Leu	Arg	Ser	Leu	Thr	Asp	Ala	Val	Pro	Leu	Ser	
	595						600					605				
Val	Leu	Ile	Leu	Gly	Leu	Leu	Ile	Met	Phe	Ile	Thr	Ile	Val	Phe	Cys	
	610					615					620					
Ala	Ala	Gly	Ile	Val	Val	Leu	Val	Leu	His	Arg	Arg	Arg	Arg	Tyr	Lys	
625					630				635						640	
Lys	Lys	Gln	Val	Asp	Glu	Gln	Met	Arg	Asp	Asn	Ser	Pro	Val	His	Leu	
				645					650					655		
Gln	Tyr	Ser	Met	Tyr	Gly	His	Lys	Thr	Thr	His	His	Thr	Thr	Glu	Arg	
		660						665					670			
Pro	Ser	Ala	Ser	Leu	Tyr	Glu	Gln	His	Met	Gly	Ala	His	Glu	Glu	Leu	
		675					680					685				
Lys	Leu	Met	Glu	Thr	Leu	Met	Tyr	Ser	Arg	Pro	Arg	Lys	Val	Leu	Val	
	690					695				700						
Glu	Gln	Thr	Lys	Asn	Glu	Tyr	Phe	Glu	Leu	Lys	Ala	Asn	Leu	His	Ala	
705					710				715						720	
Glu	Pro	Asp	Tyr	Leu	Glu	Val	Leu	Glu	Gln	Gln	Thr					
				725					730							

<210> 106
 <211> 395
 <212> PRT
 <213> Homo sapiens

<400> 106

Met	Lys	Leu	Trp	Ile	His	Leu	Phe	Tyr	Ser	Ser	Leu	Leu	Ala	Cys	Ile	
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Ser	Leu	His	Ser	Gln	Thr	Pro	Val	Leu	Ser	Ser	Arg	Gly	Ser	Cys	Asp	
			20					25					30			
Ser	Leu	Cys	Asn	Cys	Glu	Glu	Lys	Asp	Gly	Thr	Met	Leu	Ile	Asn	Cys	
		35					40					45				
Glu	Ala	Lys	Gly	Ile	Lys	Met	Val	Ser	Glu	Ile	Ser	Val	Pro	Pro	Ser	
	50					55					60					
Arg	Pro	Phe	Gln	Leu	Ser	Leu	Leu	Asn	Asn	Gly	Leu	Thr	Met	Leu	His	
65					70				75						80	
Thr	Asn	Asp	Phe	Ser	Gly	Leu	Thr	Asn	Ala	Ile	Ser	Ile	His	Leu	Gly	
			85						90					95		
Phe	Asn	Asn	Ile	Ala	Asp	Ile	Glu	Ile	Gly	Ala	Phe	Asn	Gly	Leu	Gly	
			100					105						110		

Arg	Leu	Lys	Val	Leu	Ile	Leu	Asn	Asp	Asn	Ala	Ile	Glu	Ser	Leu	Pro	
				165					170						175	
Pro	Asn	Ile	Phe	Arg	Phe	Val	Pro	Leu	Thr	His	Leu	Asp	Leu	Arg	Gly	
			180					185					190			
Asn	Gln	Leu	Gln	Thr	Leu	Pro	Tyr	Val	Gly	Phe	Leu	Glu	His	Ile	Gly	
		195					200					205				
Arg	Ile	Leu	Asp	Leu	Gln	Leu	Glu	Asp	Asn	Lys	Trp	Ala	Cys	Asn	Cys	
	210					215					220					
Asp	Leu	Leu	Gln	Leu	Lys	Thr	Trp	Leu	Glu	Asn	Met	Pro	Pro	Gln	Ser	
225					230					235					240	
Ile	Ile	Gly	Asp	Val	Val	Cys	Asn	Ser	Pro	Pro	Phe	Phe	Lys	Gly	Ser	
			245					250						255		
Ile	Leu	Ser	Arg	Leu	Lys	Lys	Glu	Ser	Ile	Cys	Pro	Thr	Pro	Pro	Val	
			260					265					270			
Tyr	Glu	Glu	His	Glu	Asp	Pro	Ser	Gly	Ser	Leu	His	Leu	Ala	Ala	Thr	
	275						280					285				
Ser	Ser	Ile	Asn	Asp	Ser	Arg	Met	Ser	Thr	Lys	Thr	Thr	Ser	Ile	Leu	
	290					295					300					
Lys	Leu	Pro	Thr	Lys	Ala	Pro	Gly	Leu	Ile	Pro	Tyr	Ile	Thr	Lys	Pro	
305					310					315					320	
Ser	Thr	Gln	Leu	Pro	Gly	Pro	Tyr	Cys	Pro	Ile	Pro	Cys	Asn	Cys	Lys	
			325					330					335			
Val	Leu	Ser	Pro	Ser	Gly	Leu	Leu	Ile	His	Cys	Gln	Glu	Arg	Asn	Ile	
			340					345					350			
Glu	Ser	Leu	Ser	Asp	Leu	Arg	Pro	Pro	Gln	Asn	Pro	Arg	Lys	Leu		
	355						360				365					
Ile	Leu	Ala	Gly	Asn	Ile	Ile	His	Ser	Leu	Met	Asn	Pro	Ser	Phe	Gly	
	370					375					380					
Pro	Lys	His	Leu	Glu	Glu	Glu	Glu	Glu	Arg	Asn	Glu	Lys	Glu	Gly	Ser	
385					390				395						400	
Asp	Ala	Lys	His	Leu	Gln	Arg	Ser	Leu	Leu	Glu	Gln	Glu	Asn	His	Ser	
			405					410						415		
Pro	Leu	Thr	Gly	Ser	Asn	Met	Lys	Tyr	Lys	Thr	Thr	Asn	Gln	Ser	Thr	
		420					425						430			
Glu	Phe	Leu	Ser	Phe	Gln	Asp	Ala	Ser	Ser	Leu	Tyr	Arg	Asn	Ile	Leu	
	435					440					445					
Glu	Lys	Glu	Arg	Glu	Leu	Gln	Gln	Leu	Gly	Ile	Thr	Glu	Tyr	Leu	Arg	
	450					455				460						
Lys	Asn	Ile	Ala	Gln	Leu	Gln	Pro	Asp	Met	Glu	Ala	His	Tyr	Pro	Gly	
465					470				475						480	
Ala	His	Glu	Glu	Leu	Lys	Leu	Met	Glu	Thr	Leu	Met	Tyr	Ser	Arg	Pro	
			485					490						495		
Arg	Lys	Val	Leu	Val	Glu	Gln	Thr	Lys	Asn	Glu	Tyr	Phe	Glu	Leu	Lys	
		500						505					510			
Ala	Asn	Leu	His	Ala	Glu	Pro	Asp	Tyr	Leu	Glu	Val	Leu	Glu	Gln	Gln	
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Thr

<210> 108

<211> 347

<212> DNA

<213> Homo sapiens

<400> 108

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aaagggtctg ggggtggctgg gaatgatttg gggcgatgga agcacagatt atacttcagc 180
tctccaatcc agactgagca tcaggaagga caattcaaga gccaaacttt cttaaaaaat 240
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<210> 109

<211> 115
 <212> PRT
 <213> Homo sapiens

<400> 109
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 20 25 30
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 35 40 45
 Asp Leu Gly Arg Trp Lys His Arg Leu Tyr Phe Ser Ser Pro Ile Gln
 50 55 60
 Thr Glu His Gln Glu Gly Gln Phe Lys Ser Gln Thr Phe Leu Lys Asn
 65 70 75 80
 Asn Ser Leu Gln Thr Asp Asp Thr Ala Arg Tyr Tyr Cys Ala Arg Asp
 85 90 95
 Glu Gly Arg Gly Leu Cys Leu Ile Ala Gly Ala Lys Gly Pro Arg Ser
 100 105 110
 Pro Ser Pro
 115

<210> 110
 <211> 330
 <212> DNA
 <213> Homo sapiens

<400> 110
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 caacagaaac caggacagcc acccagactc ctcattctatc ttgtatccaa cctagaatct 180
 ggggtccctg ccagggttcag tggcagtgagg tctgggacag acttcaccct caacatccat 240
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<210> 111
 <211> 110
 <212> PRT
 <213> Homo sapiens

<400> 111
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 Gln Arg Ala Thr Ile Ser Tyr Arg Ala Ser Lys Ser Val Ser Thr Ser
 20 25 30
 Gly Tyr Ser Tyr Met His Trp Asn Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Arg Leu Leu Ile Tyr Leu Val Ser Asn Leu Glu Ser Gly Val Pro Ala
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Asn Ile His
 65 70 75 80
 Pro Val Glu Glu Glu Asp Ala Ala Thr Tyr Tyr Cys Gln His Ile Arg
 85 90 95
 Glu Leu Thr Arg Ser Glu Gly Gly Pro Ser Trp Arg Ser Asn
 100 105 110

<210> 112
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 112

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Val	His	His	Met	His	Arg	Leu	Arg	Ile	Leu	Ile	Asp	Arg	Leu	Trp	Cys
			20					25					30		
Lys	Leu	Gly	Ser	Pro	Ala	Ser	Arg	Lys	Gly	Ser	Gly	Val	Ala	Gly	Asn
		35					40					45			
Asp	Leu	Gly	Arg	Trp	Lys	His	Arg	Leu	Tyr	Phe	Ser	Ser	Pro	Ile	Gln
	50					55					60				
Thr	Glu	His	Gln	Glu	Gly	Gln	Phe	Lys	Ser	Gln	Thr	Phe	Leu	Lys	Asn
65					70					75					80
Asn	Ser	Leu	Gln	Thr	Asp	Asp	Thr	Ala	Arg	Tyr	Tyr	Cys	Ala	Arg	Asp
				85					90					95	
Glu	Gly	Arg	Gly	Leu	Cys	Leu	Ile	Ala	Gly	Ala	Lys	Gly	Pro	Arg	Ser
			100					105						110	
Pro	Ser	Pro													
		115													

<210> 113

<211> 110

<212> PRT

<213> Homo sapiens

<400> 113

Asp	Ile	Gln	Leu	Thr	Gln	Ser	Pro	Ala	Ser	Leu	Ala	Val	Ser	Leu	Gly
1				5					10					15	
Gln	Arg	Ala	Thr	Ile	Ser	Tyr	Arg	Ala	Ser	Lys	Ser	Val	Ser	Thr	Ser
			20					25					30		
Gly	Tyr	Ser	Tyr	Met	His	Trp	Asn	Gln	Gln	Lys	Pro	Gly	Gln	Pro	Pro
		35					40					45			
Arg	Leu	Leu	Ile	Tyr	Leu	Val	Ser	Asn	Leu	Glu	Ser	Gly	Val	Pro	Ala
	50					55					60				
Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Asn	Ile	His
65					70					75					80
Pro	Val	Glu	Glu	Glu	Asp	Ala	Ala	Thr	Tyr	Tyr	Cys	Gln	His	Ile	Arg
				85					90					95	
Glu	Leu	Thr	Arg	Ser	Glu	Gly	Gly	Pro	Ser	Trp	Arg	Ser	Asn		
			100					105						110	